

## SPECIFICATIONS

### Receiver unit (A-711/L)

#### Amplifier section

##### Rated power output

35 watts per channel minimum RMS, both channels driven, at 6 Ω from 40 Hz to 20,000 Hz with no more than 0.09% total harmonic distortion (FTC)

(IEC/NF) From 63 to 12,500 Hz, 0.7% T.H.D. at 6 Ω	40 W + 40 W
(DIN) 1 kHz, at 6 Ω	43 W + 43 W
(IHF '66) From 40 to 20 kHz, 0.09% T.H.D. at 6 Ω	39 W + 39 W
(EIAJ) Maximum useful power output at 6 Ω	50 W + 50 W
Total harmonic distortion	0.09% at rated power 0.04% at 1 kHz, 1/2 rated power
<b>Frequency response</b>	
CD, TUNER, AUX, TAPE	40 Hz ~ 20 kHz, +1.5 dB, -3 dB
Signal to noise ratio (IHF '66)	
DAT INPUT	85 dB
Input sensitivity/impedance	
DAT INPUT	150 mV/47 kΩ
N.B. circuit (-30 dB VOLUME level)	-20 dB (at 60 Hz)
Output level/impedance	
SUB WOOFER OUT	1.0 V/3.6 kΩ
Power consumption	200 W (IEC)
Dimensions	1.5 A (for U.S.A. and Canada) W: 270 mm (10-5/8") H: 120 mm (4-3/4") D: 292 mm (11-1/2")
Weight (Net)	5.4 kg (11.88 lb)

#### A-711L FM tuner section

Tuning frequency range	87.5 MHz ~ 108 MHz
Usable sensitivity (DIN at 75 Ω)	
MONO	0.8 μV
STEREO	2.9 μV
Total harmonic distortion (DIN at 1 kHz)	
MONO	0.2% (±5.2 dBf input)
STEREO	0.3% (±5.2 dBf input)
Signal to noise ratio (DIN weighted at 1 kHz)	
MONO	88 dB (±5.2 dBf input)
STEREO	83 dB (±5.2 dBf input)

#### Note:

**KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.**

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Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

<b>Stereo separation (DIN)</b>	
1 kHz	25 dB
<b>Frequency response</b>	30 Hz ~ 15 kHz, +0.5 dB, -3.5 dB
<b>MW tuner section</b>	
Tuning frequency range	531 kHz ~ 1,602 kHz
Usable sensitivity	14 μV (500 μV/m)
Signal to noise ratio (at 30% mod, 1 mV input)	50 dB
<b>LW tuner section</b>	
Tuning frequency range	153 kHz ~ 281 kHz
Usable sensitivity	25 μV (1,000 μV/m)
Signal to noise ratio (at 30% mod, 1 mV input)	47 dB
<b>A-711 FM tuner section</b>	
Tuning frequency range	87.5 MHz ~ 108 MHz
Usable sensitivity (MONO at 75 Ω)	0.95 μV (10.8 dBf)
Total harmonic distortion (at 1 kHz)	
MONO	0.2% (±5.2 dBf input)
STEREO	0.3% (±5.2 dBf input)
Signal to noise ratio (at 1 kHz)	
MONO	76 dB (±5.2 dBf input)
STEREO	70 dB (±5.2 dBf input)
Stereo separation 1 kHz	45 dB
Frequency response	30 Hz ~ 15 kHz, +0.5 dB, -3.5 dB

#### AM tuner section

<b>Tuning frequency range</b>	
9 kHz step	531 kHz ~ 1,602 kHz
10 kHz step	530 kHz ~ 1,610 kHz
Usable sensitivity	14 μV (500 μV/m)
Signal to noise ratio (at 30% mod, 1 mV input)	50 dB

## KENWOOD CORPORATION

### KENWOOD U.S.A. CORPORATION

2201 East Dominguez Street, Long Beach, CA 90810  
561-434-1170

### KENWOOD ELECTRONICS CANADA INC.

P.O. Box 1070, 950 Gains Court, Mississauga, Ontario, Canada L4Y 4C2

### TRIO-KENWOOD U.K. LTD.

KENWOOD House, Dwight Road, Watford, Herts, Wat 166, United Kingdom

### KENWOOD ELECTRONICS BENELUX N.V.

Moluksesteegweg 31 B-1000 Zaventem, Belgium

### KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rempferker Str. 15, 60566 Heusenstamm, West Germany

### TRIO-KENWOOD FRANCE S.A.

13 Boulevard Ney, 75018 Paris, France

### KENWOOD LINEAR S.p.A.

20125 MILANO via ARBE, 5C, ITALY

### KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (INCORPORATED IN NSW)

46 Woodcock Place, Lane Cove, N.S.W. 2066, Australia

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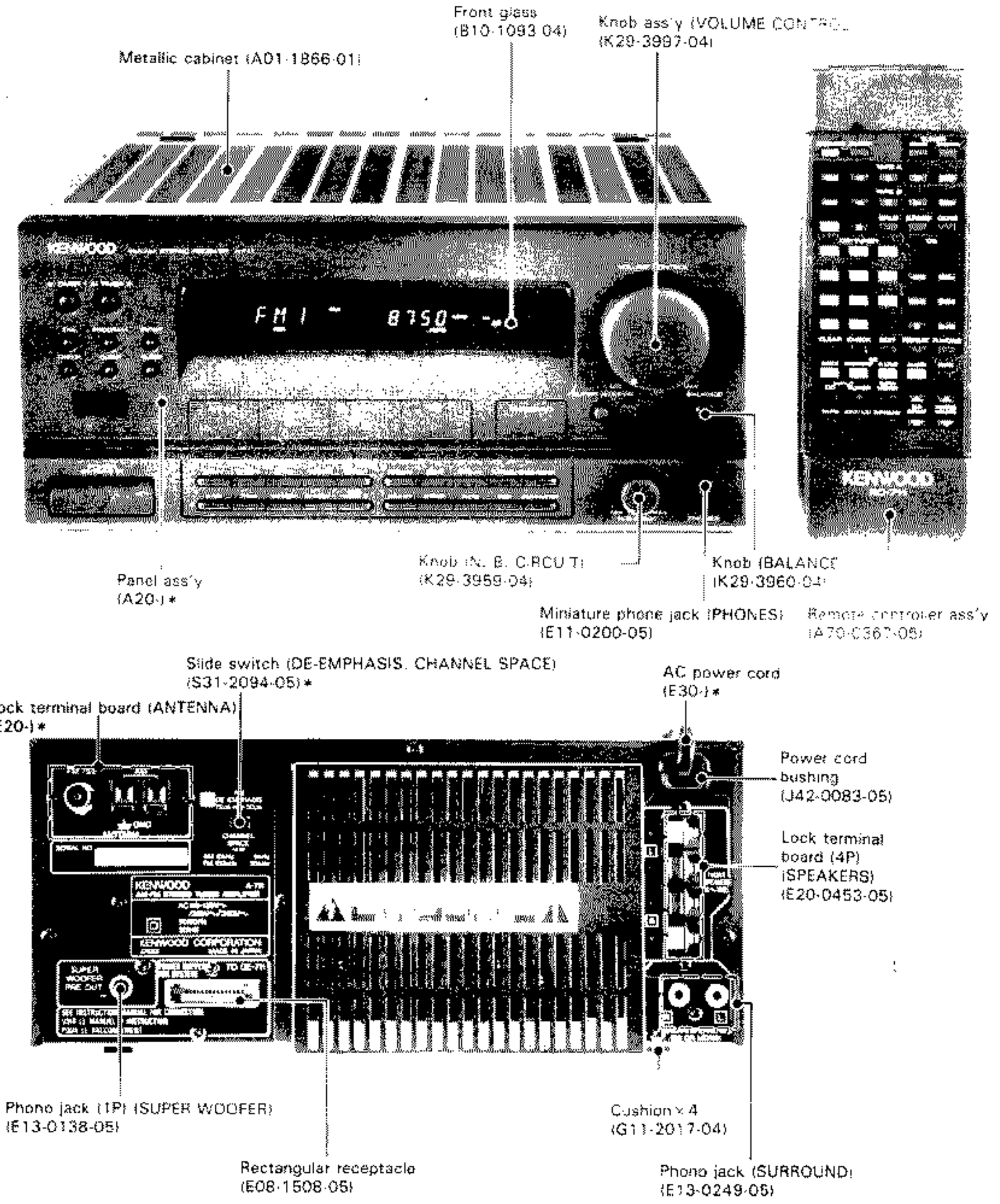
Wing Kee Building, 4th Floor, 34-37, Connaught Road Central, Hong Kong

# A-711/711L

## SERVICE MANUAL

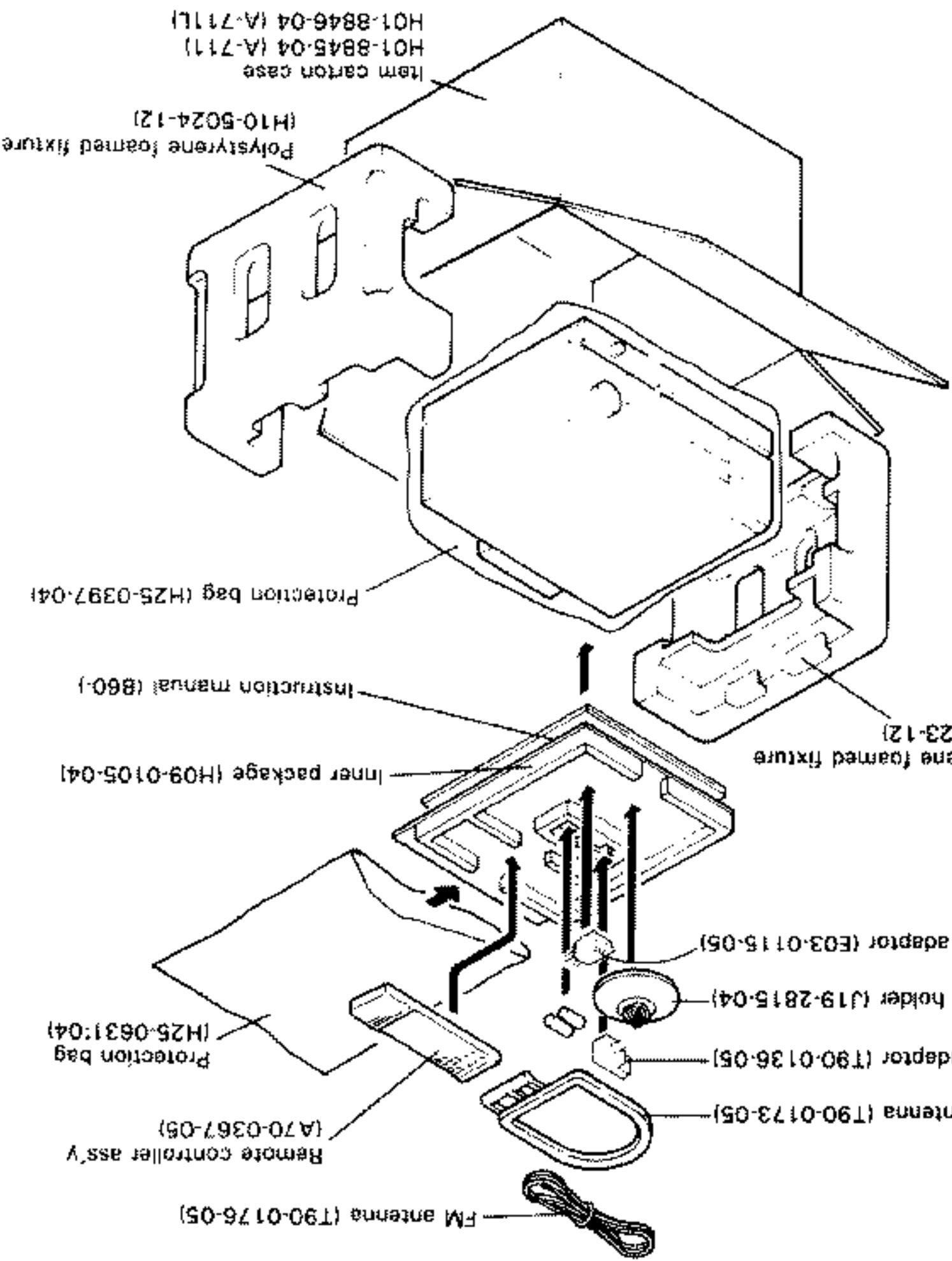
(COMPACT HI-FI SYSTEM UD COMPONENT SYSTEM UD-7)

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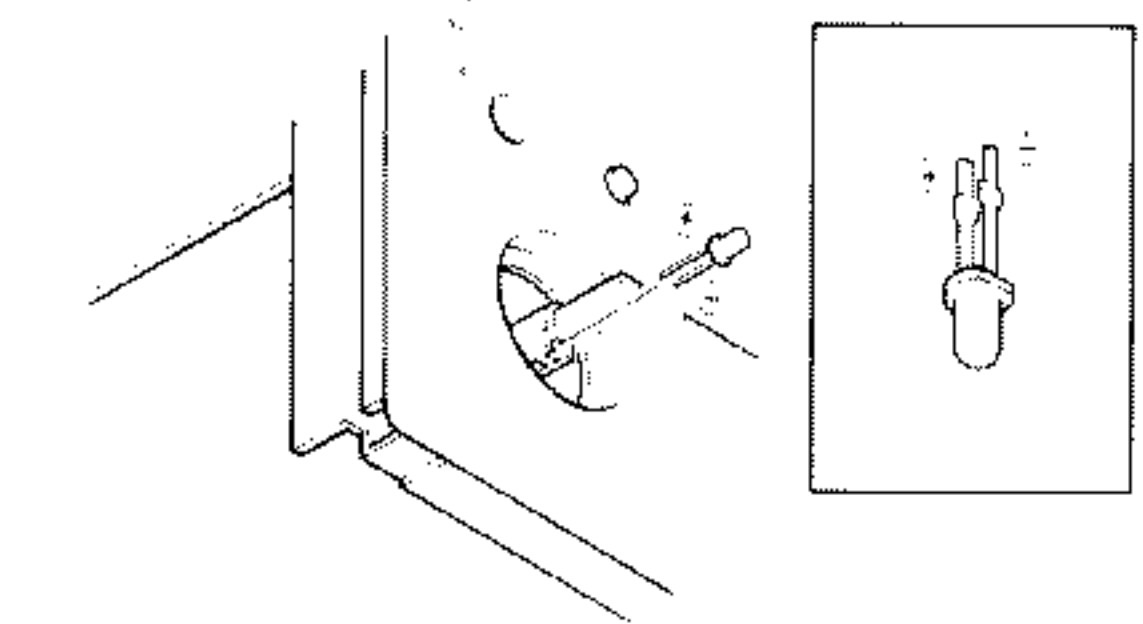
A-711 : K, P, Y, M, X type  
A-711L: T, E type

\*Refer to parts list on page 46.  
Photo is A-711.



## PACKING

7 Exchange the fuse resistance mounted on the printed board of power-source transformer for a new one after removing the transformer and putting it on the side of the set.



6 LED for VOLUME (Part number: B30-1284-08)

It is basically the LED for volume, which serves as one part of master VOL ass'y (R29-5042-05). However, the LED can be easily removed with tweezers after removing the volume thumb-screw when LED malfunctions.

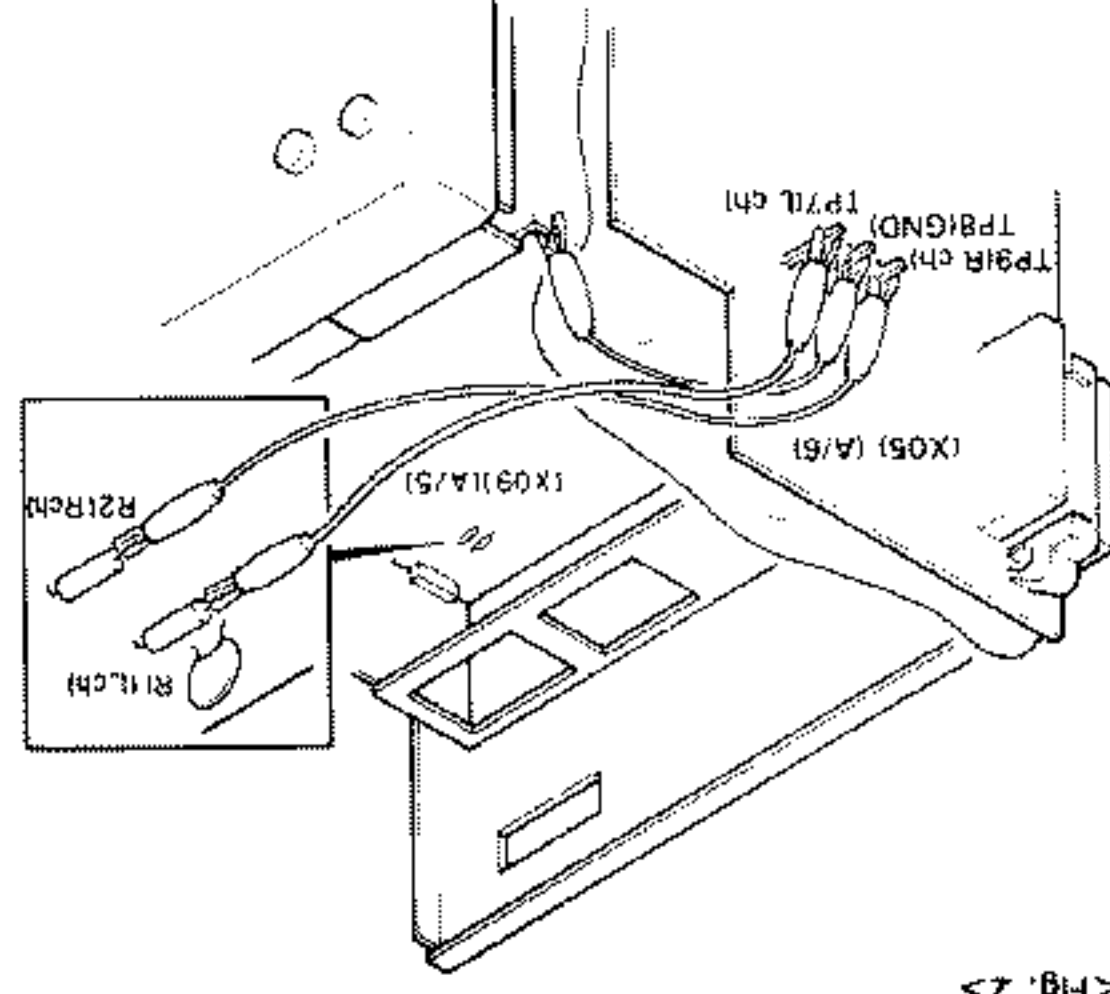
5. The A1 sensor for remote-control light receptor, of X05 uses initially W02-1049-05 and uses W02-1048-05 thereafter. Shapes and the location of terminals are different from each other.

4. As a new function, one pattern of graphic equalizer has been added to the disassembly method for repair.

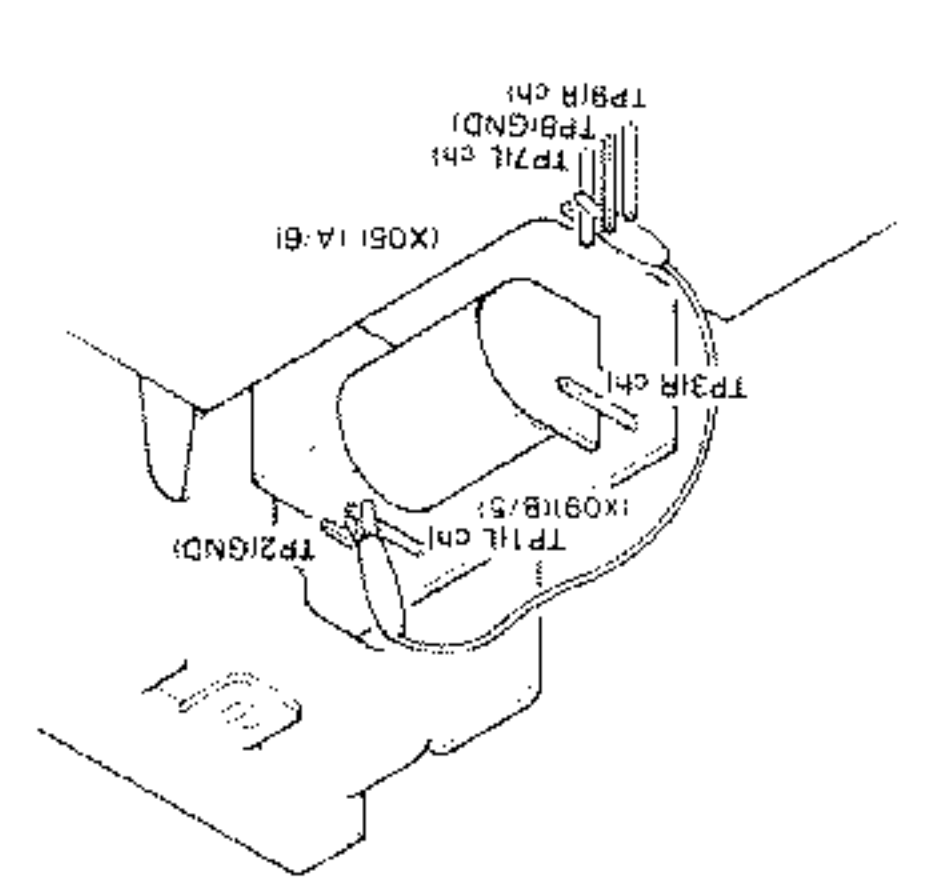
3. The small radiator cover is attached to this unit. Use it to check power transistors and so on by removing it. In addition, the main board can be checked by removing it. For further detail, refer to the disassembly method for repair.

2. This unit is the receiver that is incorporated into a graphic equalizer. Therefore, radio waves cannot be received with this unit alone. When you listen to radio waves with this unit alone, connection must be made by the following method:

1. Be sure to refer to the instruction manual of UD-7 of this system for the operation.



< Fig. 2 >



< Fig. 1 >

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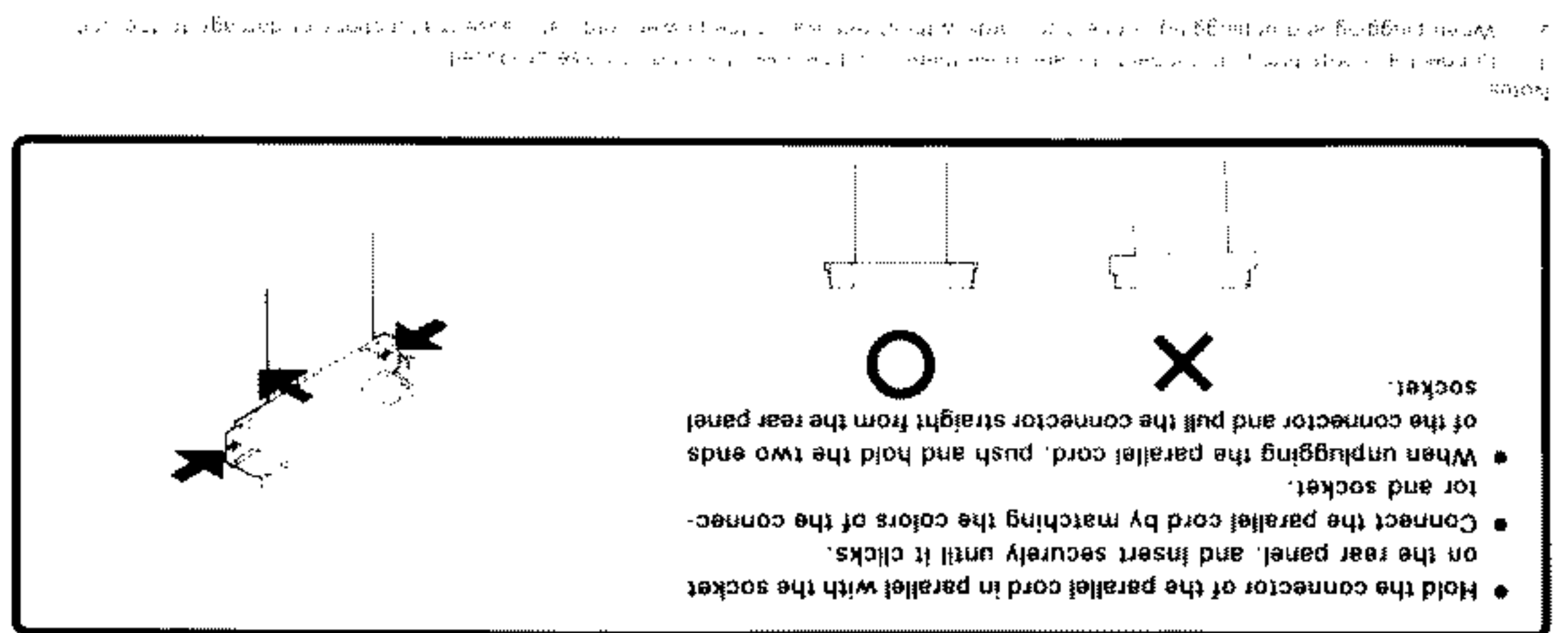
## NOTES REGARDING SERVICES OF THIS UNIT AND FEATURES OF SYSTEM

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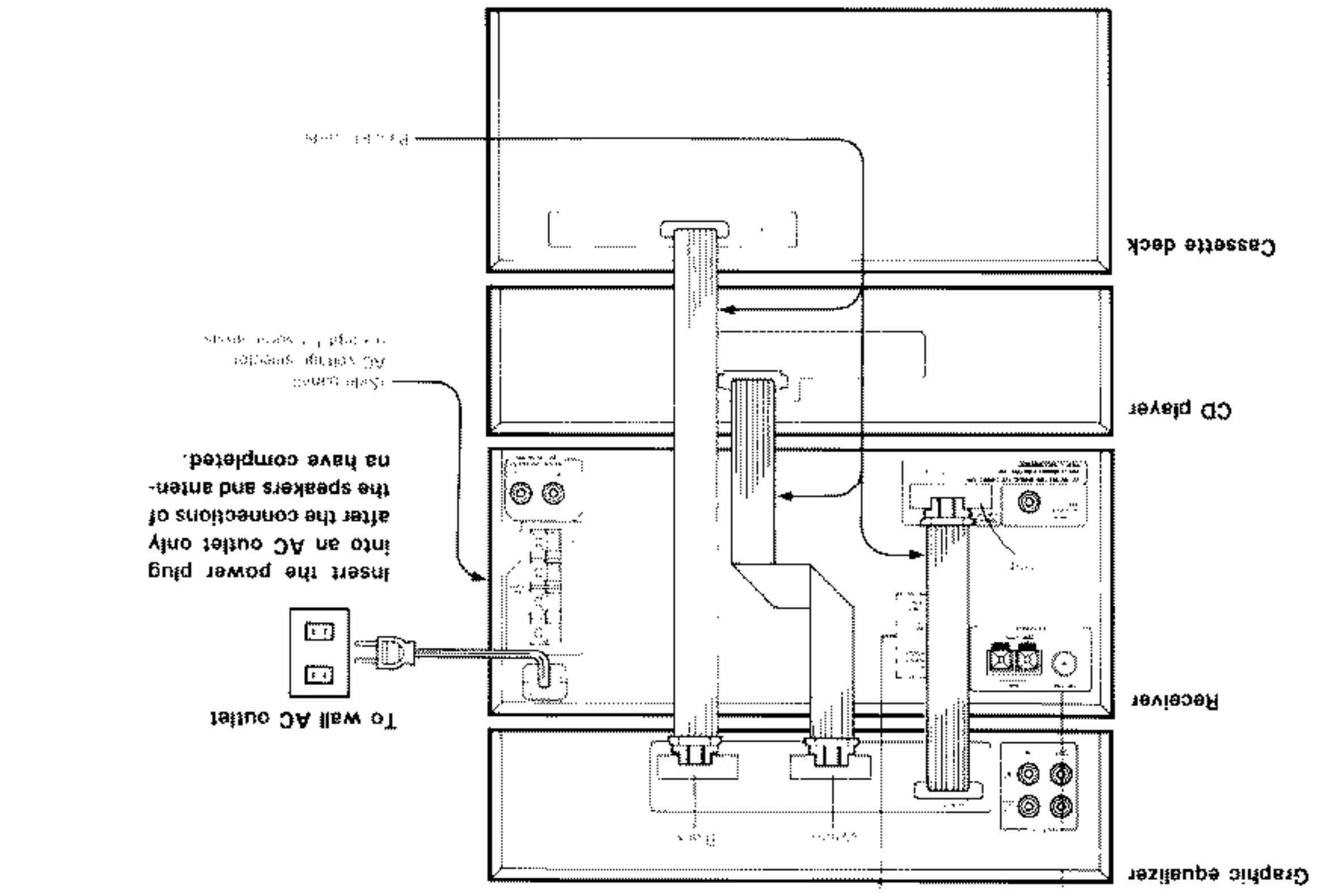
## CONTENTS

NOTES REGARDING SERVICES OF THIS UNIT AND FEATURES OF SYSTEM

## NOTES REGARDING SERVICES OF THIS UNIT AND FEATURES OF SYSTEM



■ Connection of parallel cord

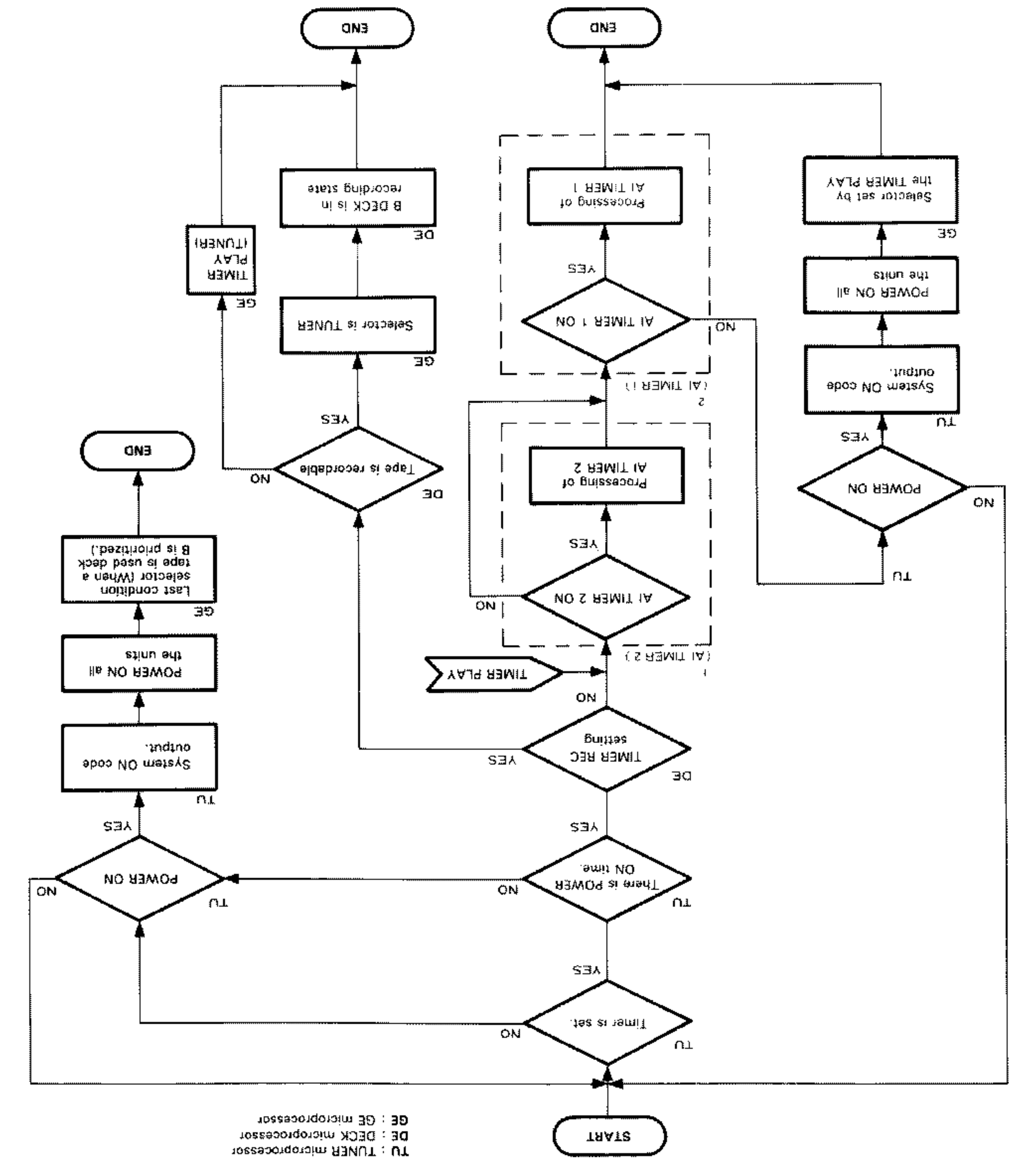


Do not plug in the power lead until all connections are completed.  
When connecting the parallel cord, be sure to match the colors of the sockets of the related components.  
Make connection as shown below. When connecting the related system components, refer also to the instruction manuals.

System connections

A-711/711L

When connecting the related system components, refer also to the instruction manuals.

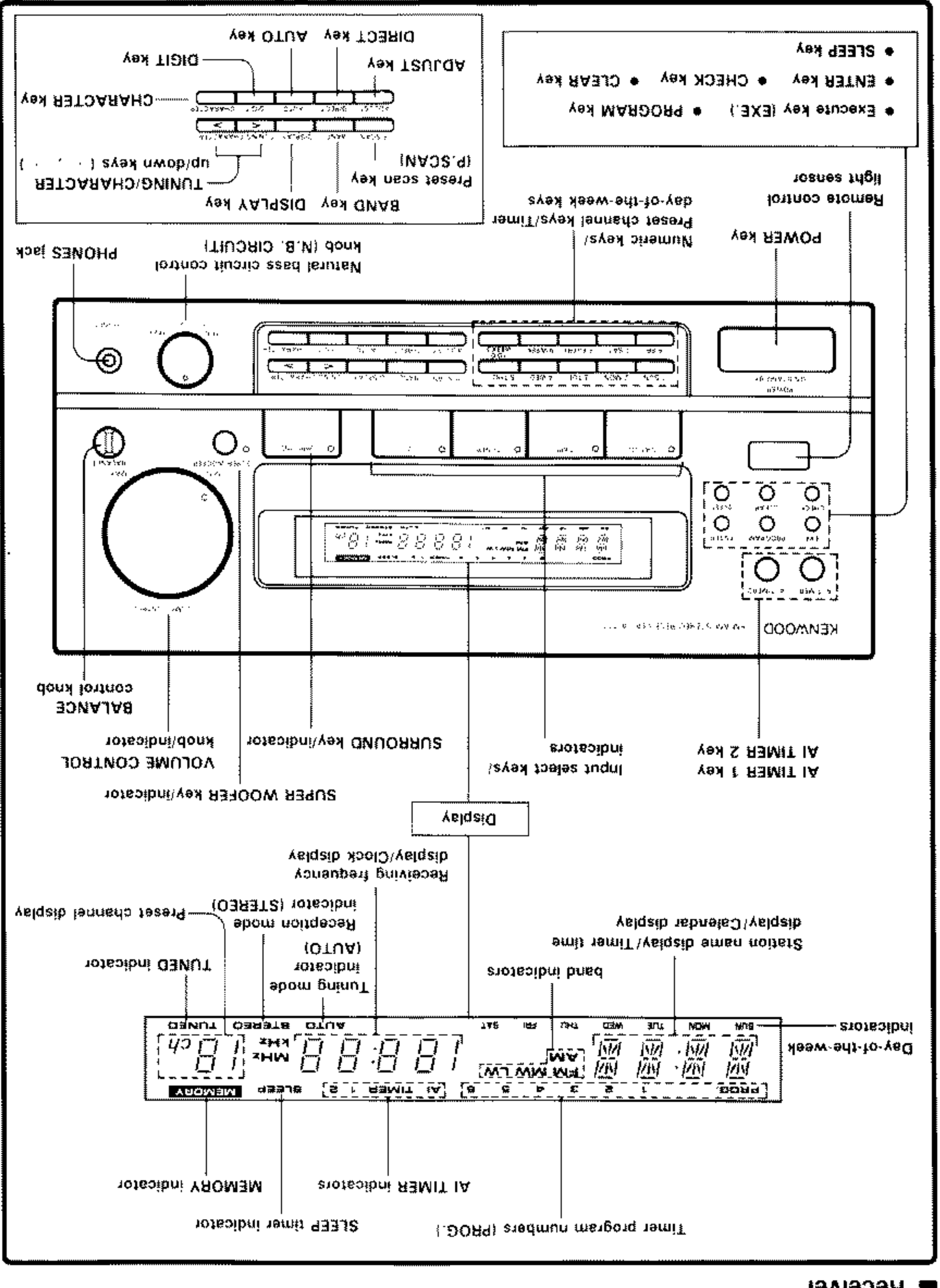


Operation of UD-7 system through sound generation

CIRCUIT DESCRIPTION

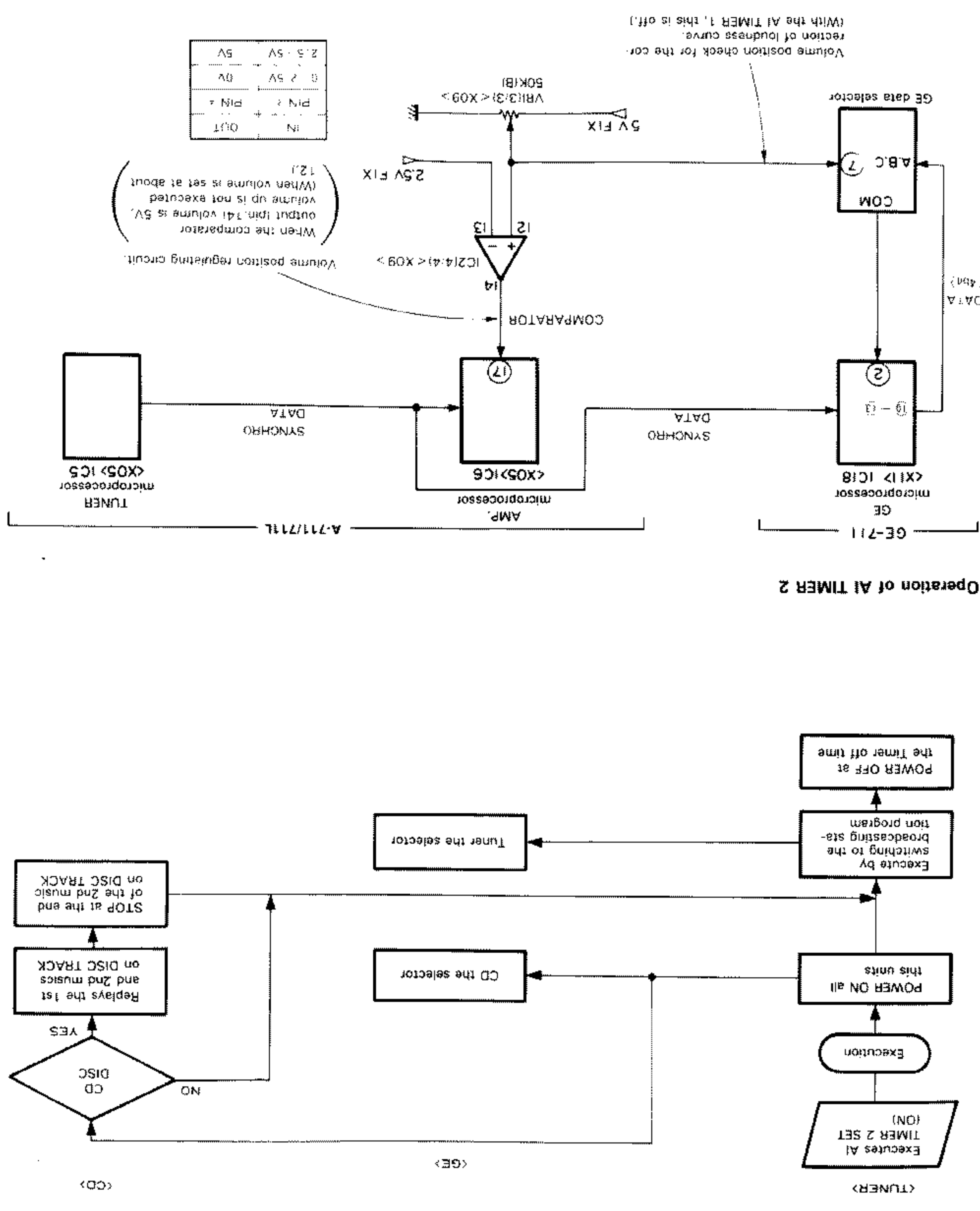
A-711/711L

Controls and indicators



A-711/711L

① Flow chart of AI TIMER 2



CIRCUIT DESCRIPTION

A-711/711L

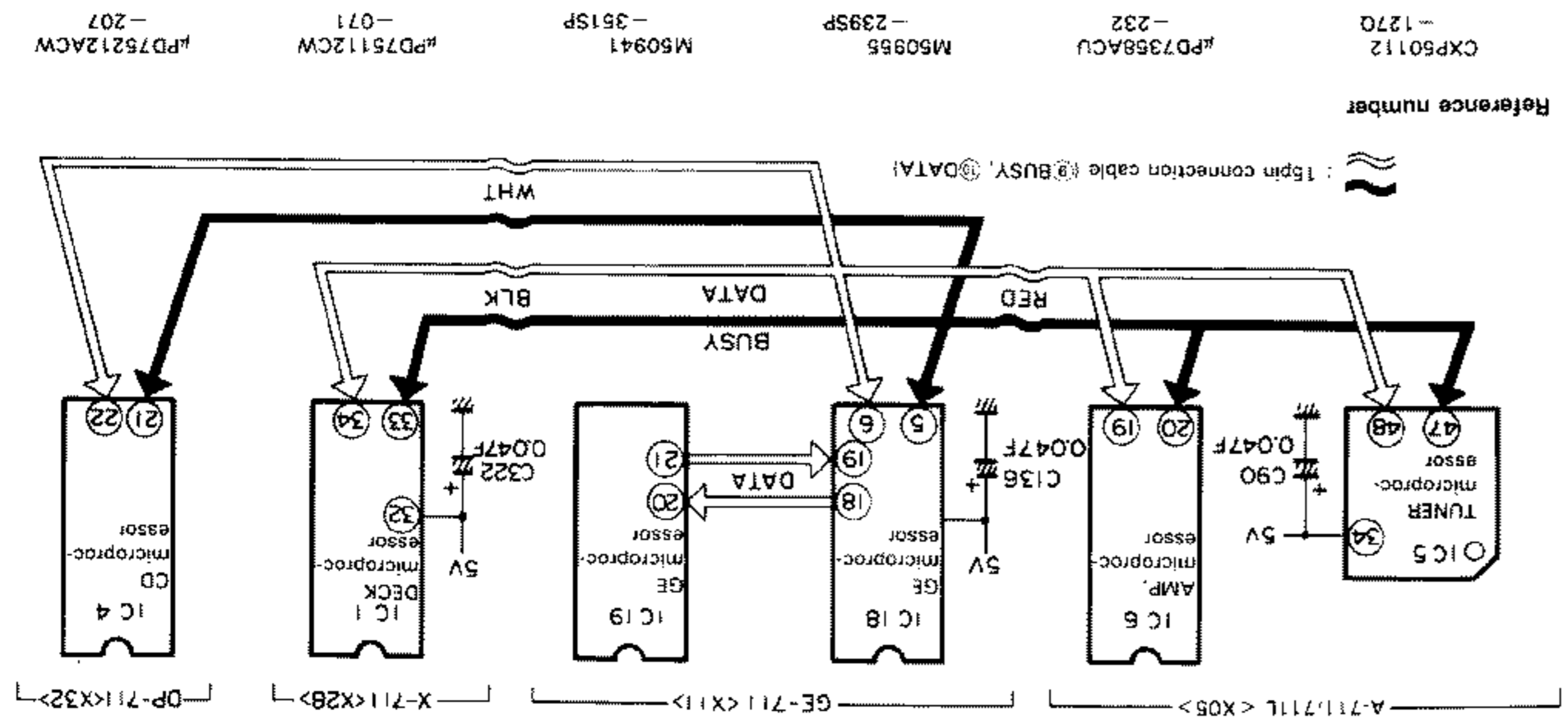
CIRCUIT DESCRIPTION

Ref. No.	Components	Use/Function	Operation/Condition
IC1	NJM2058D	Surround buffer	Surround buffer
IC2	IC2 1/4 (1/4) headphone amplifier, IC2 1/4 (1/4) super-woofer or buffer, V <sub>H</sub> detecting comparator	Headphone amplifier, Super woofer	Headphone amplifier, Super woofer
IC3	TC9215P	Surround selector	Surround selector
IC4	IC1237HA	Protection	Protection
IC5	TAB409S	Main volume drive	Main volume drive
IC6	TAB409S	N.B.C. volume drive	N.B.C. volume drive
IC7	PC7915HF	-15V stabilizing power source	-15V stabilizing power source
IC1-4	2SA921F(E)	For 1st stage A class	For 1st stage A class
IC5-6	2SA921F(E)	For the 2nd stage A class	For the 2nd stage A class
IC7-10	2C1845F(E)	For the 2nd stage A class	For the 2nd stage A class
IC11,12	2SC1437F191V(W)	For temperature compensation	For temperature compensation
IC13,14	2SD2258BT*5	Final Tr.	Final Tr.
IC15,16	2SB1493BT*5	For detecting overloading	For detecting overloading
IC17,18	2SC2631R(S)	For super woofer muting	For super woofer muting
IC19	2SC2878(B)	For super woofer muting	For super woofer muting
IC20	2A733A(H,Q,P) or 2A833S(Q,R)	Super woofer muting drive	Super woofer muting drive
IC21	2A733A(H,Q,P) or 2A833S(Q,R)	Triple filter	Triple filter
IC22	2SA921F(E)	For protection	For protection
IC23	2C3666	AC relay drive	AC relay drive
IC24	2SC3666	It drives AC relay K1, 2 with the pin No. 14 of IC6 (X05).	It drives AC relay K1, 2 with the pin No. 14 of IC6 (X05).
IC25	2SC1740S(Q,R) or 2SC945A(H,Q,P)	Speaker relay drive	Speaker relay drive
IC26	2SD1266(Q,P)	+15V stabilizing, power source	+15V stabilizing, power source
IC27	HSS104 or 1SS133	For A class	For A class
IC28	HSS104A or 1SS131	For protection	For protection
IC29	RBV-602FA	For rectification	For rectification
IC30	HZS155(B) or HD15J5(B)	+15V stabilizing, power source	+15V stabilizing, power source
IC31	HZS155(B) or HD15J5(B)	For +15V stabilizing power source A class	For +15V stabilizing power source A class
IC32	HZS1N(B2) or R051ES1(B2)	For VR detection	For VR detection
IC33	HZS47N(B) or R047ES(B)	For muting	For muting
IC34,35	HSS104 or 1SS133	For protection of static electricity	For protection of static electricity
IC36	HSS104 or 1SS133	For removing headphone snuck noise	For removing headphone snuck noise
IC37	HSS104 or 1SS133	For removing selector snuck noise	For removing selector snuck noise
IC38,25	HSS104 or 1SS133	For relay	For relay
IC39	HSS104A or 1SS131	For detecting protection AC	For detecting protection AC
IC40	55566	For rectifying AC relay power source	For rectifying AC relay power source
IC41	HSS104 or 1SS133	For VR LED	For VR LED
IC42	HSS104 or 1SS133	For protection of static electricity	For protection of static electricity

Function of components Audio unit (X09-3142-71)

CIRCUIT DESCRIPTION

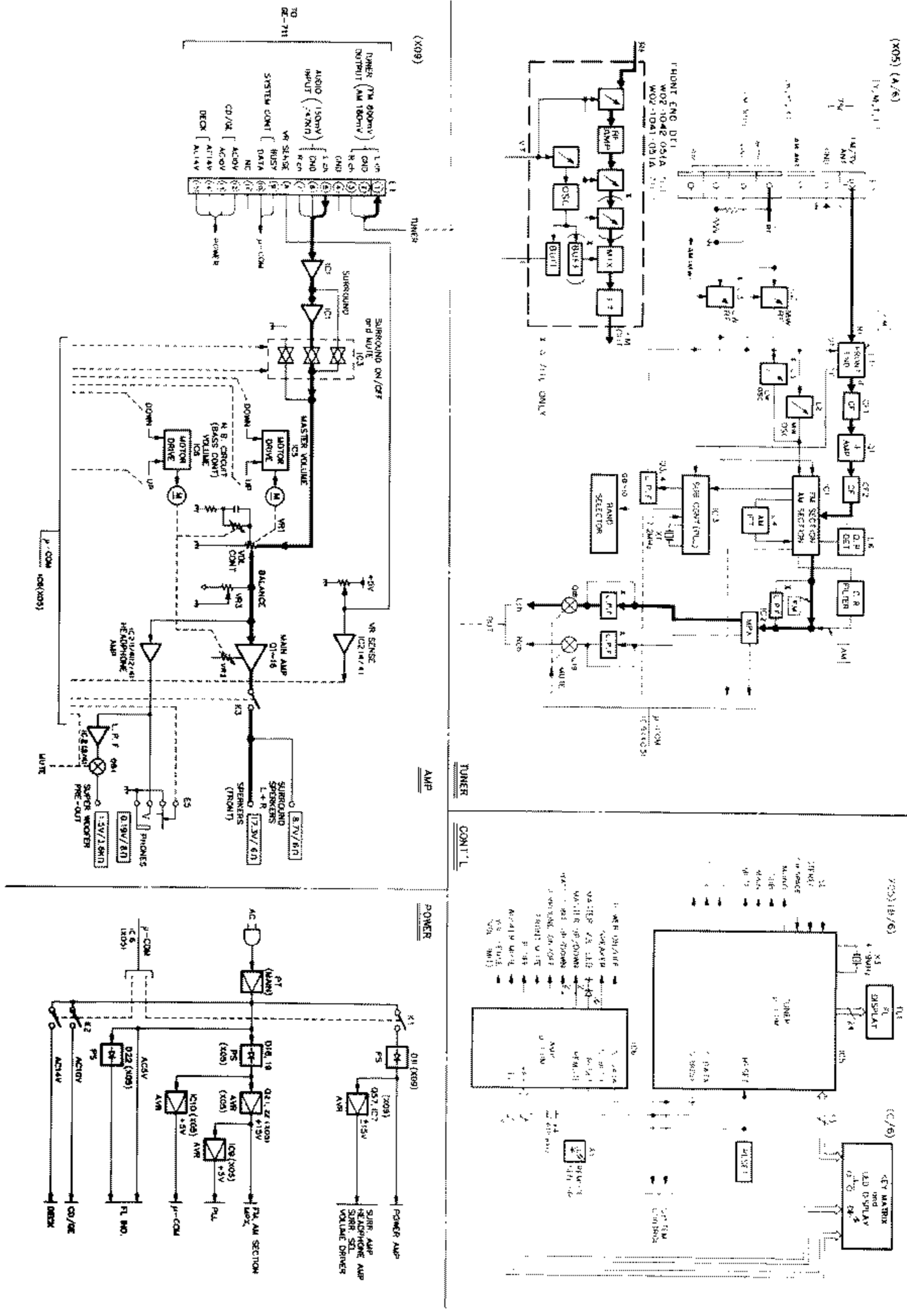
Microprocessor and back-up condenser of this unit



Back-up Condenser	Initialization (Reset)	Operation	Release	Contents
IC5 (X05) C90 0.047F 5V	Turn on AC while pressing the "ENTER" key for more than three seconds per selector turns out to GE.	11) Turn on AC while pressing the "ENTER" key and turning "DOWN" keys, insert AC plug into the outlet and simultaneously pressing the selector "CD" key.	1) Turn AC on and off without pressing any key.	1) Turns on all the FL tubes. For details, see the service manuals of various equipment.
IC6 (X05) C136 0.047F 5V	Turn on AC while pressing the "ENTER" key for more than three seconds per selector turns out to GE.	12) There is also the "FLAT" key.	2) There is also the "FLAT" key.	No FL tube

Initialization (reset) of each microprocessor and test mode

BLOCK DIAGRAM



Function of components Tuner unit (X05-392-71)

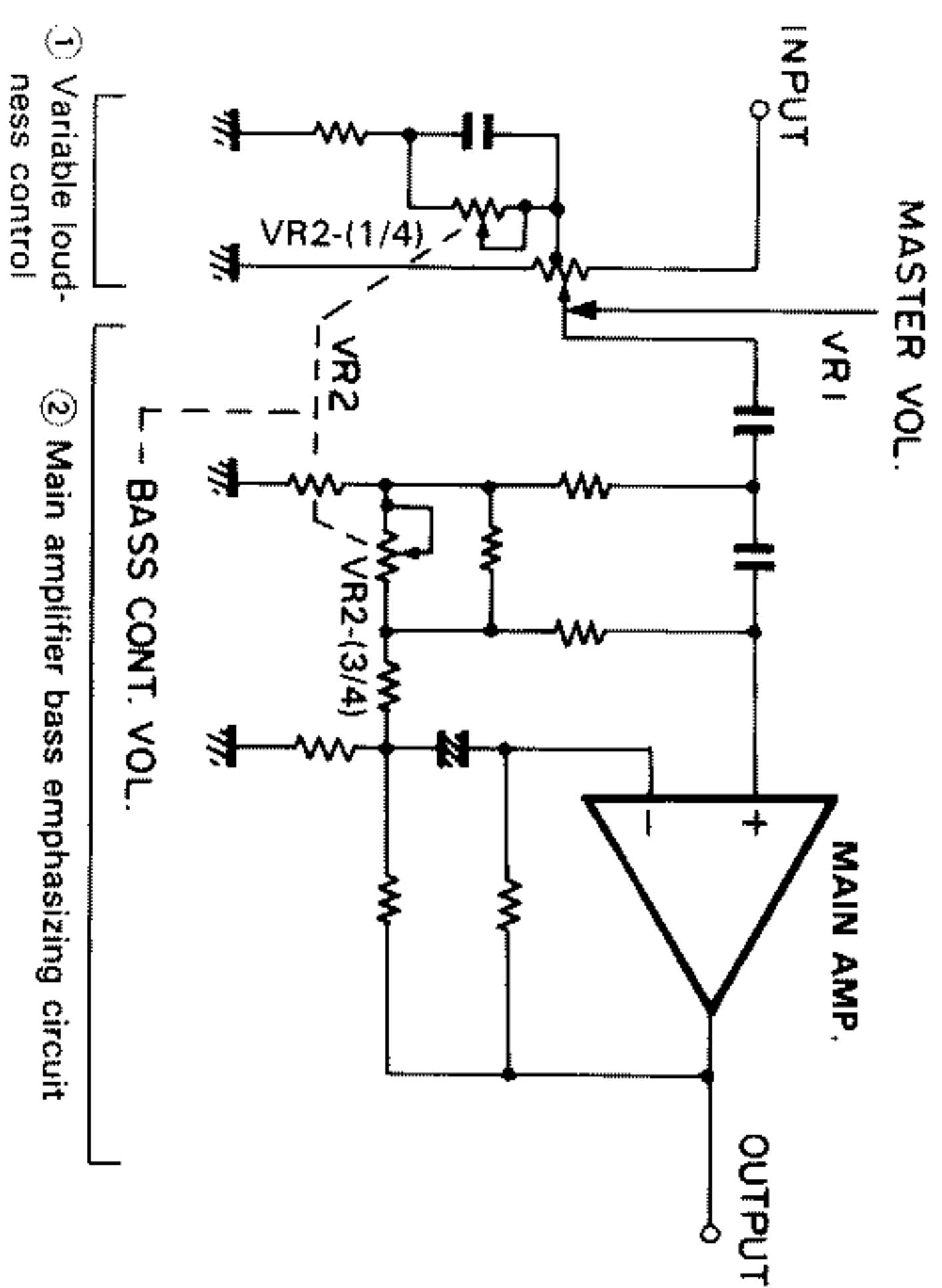
CIRCUIT DESCRIPTION

Ref. No.	Components	Use/Function	Operation/Condition
IC1	LA1265	FM/AM system IC	FM IF amplification, FM detection, AM MIX, AM IF amplification and AM detection
IC2	AN7470	Audio demodulation (AM, FM) and AM detection	FM stereo multiplex
IC3	LM7001	PLL IC	PLL
IC5	CP50112-127Q	Tuner microprocessor	Tuner control, tuner operation and control of others
IC6	PD536ACU-232	Amplifier microprocessor	Amplifier control
IC7	PT529D	Reset IC	Generates the reset power source.
IC9	PC7805HF or AN7805F	+5V 3-terminal regulator	+5V rectification
IC10	PC7805HF or AN7805F	+5V 3-terminal regulator	+5V rectification
Q1	2SC1923R(Q)	IF amplification	IF amplification of FM
Q2	2SK163L(M)	SW	At the time of LW conversion
Q3	2SC1740S(Q,R) or 2SC1845F(E)	L.P.F.	L.P.F. for PLL (integration type)
Q4	2SC1740S(Q,R) or 2SC1845F(E)	L.P.F.	L.P.F. for PLL (integration type)
Q5	2SC945A(H,Q,P) or 2SC1740S(Q,R)	MW/LW conversion	At the time of MW: ON
Q6	2SC945A(H,Q,P) or 2SC1740S(Q,R)	MW/LW conversion	At the time of LW: ON
Q7	2SC945A(H,Q,P) or 2SC1740S(Q,R)	Buffer	Buffer for FM detecting output (for L.P.F. matching)
Q8	2SA733A(H,Q,P) or 2SA833S(Q,R)	FM + B conversion	At the time of receiving FM: ON
Q9	2SA733A(H,Q,P) or 2SA833S(Q,R)	LW + B conversion	At the time of receiving LW: ON
Q10	2SA733A(H,Q,P) or 2SA833S(Q,R)	MW + B conversion	At the time of receiving MW: ON
Q11	2SC945A(H,Q,P) or 2SC1740S(Q,R)	Deemphasis conversion	Deemphasis conversion
Q12	2SC945A(H,Q,P) or 2SC1740S(Q,R)	Deemphasis conversion	Deemphasis conversion
Q13	2SC945A(H,Q,P) or 2SA1740S(Q,R)	Reversing circuit	Controls reset circuit (Tuner μ-COM)
Q14	2SA733A(H,Q,P) or 2SA833S(Q,R)	Reversing circuit	Controls reset circuit (Lampifier μ-COM)
Q15	2SA733A(H,Q,P) or 2SA833S(Q,R)	Reversing circuit	Reverses the mute signal from the amplifier microprocessor
Q16	2SA733A(H,Q,P) or 2SA833S(Q,R)	Reversing circuit	Reverses the mute signal from the tuner microprocessor
Q17	2SA733A(H,Q,P) or 2SA833S(Q,R)	Destination Conversion SW	Converts deemphas and channel space
Q18	2SD1302S(T) or 2SA833S(Q,R)	Mute	Mute SW of Lch
Q19	2SC1302S(T)	Mute	Mute SW of Hch
Q21	2SC1266(Q,P)	+14V rectification	Generates the stabilized power source for 14V
Q22	2SC945A(H,Q,P) or 2SC1740S(Q,R)		
Q23	2SC945A(H,Q,P) or 2SC1740S(Q,R)		

CIRCUIT DESCRIPTION

**N.B. CIRCUIT (X09-3142-71 (B/5))**  
 The N.B. of N.B. CIRCUIT stands for Natural Bass, and it is the circuit to create further natural bass sound.  
 It is roughly composed of ① Variable loudness control and ② Main amplifier bass emphasizing circuit showed in the chart.  
 The ① Variable loudness control in the chart has become able to vary the level of loudness control by mounting the traditional loudness control variable VR (VR2, 1/4) onto itself.  
 The ② main amplifier bass emphasizing circuit can boost up the desired frequency with the fixed number of C.R. parts for input and returning C.R. parts of main amplifier. It has also become able to vary these boost levels by mounting VR2, (3/4) onto it. The fixed number of this A-7111/711L has been set so as to boost up 60 Hz.

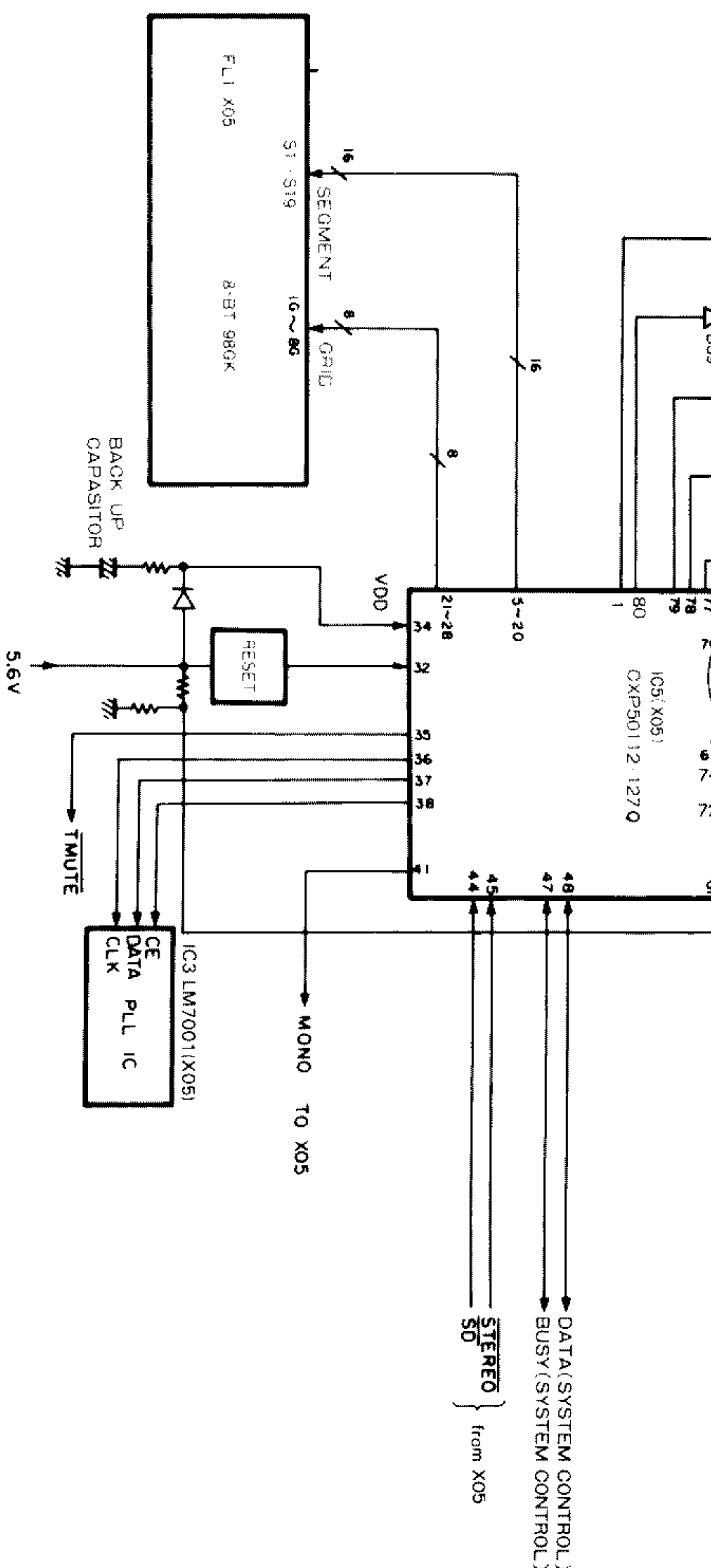
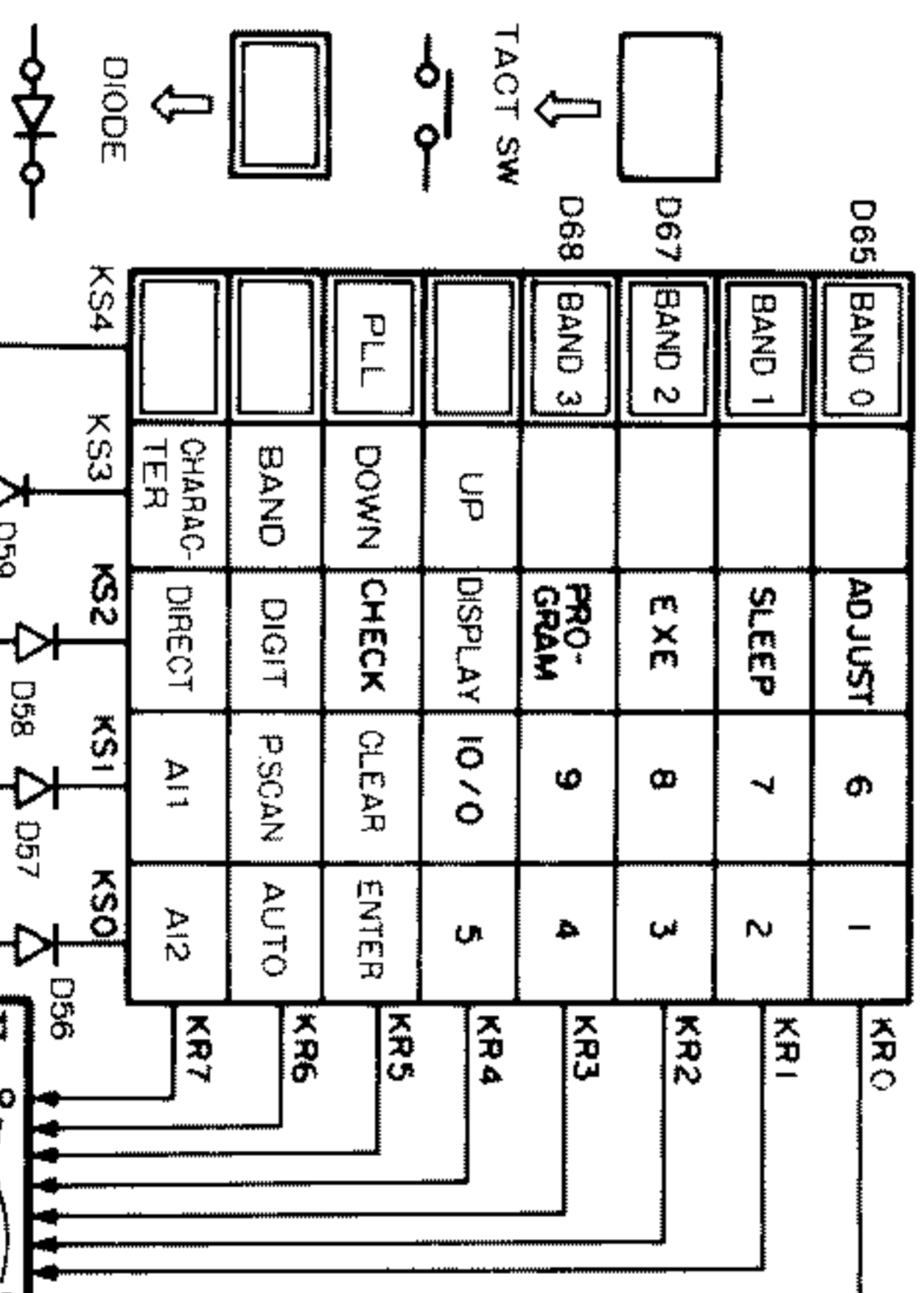
The action of this circuit results from the combination of aforementioned ① and ②, which also can vary the boost level of bass sound at the same time.



**IC5: CXP50112-127Q (X05-3992-71)**  
**TUNER microprocessor**

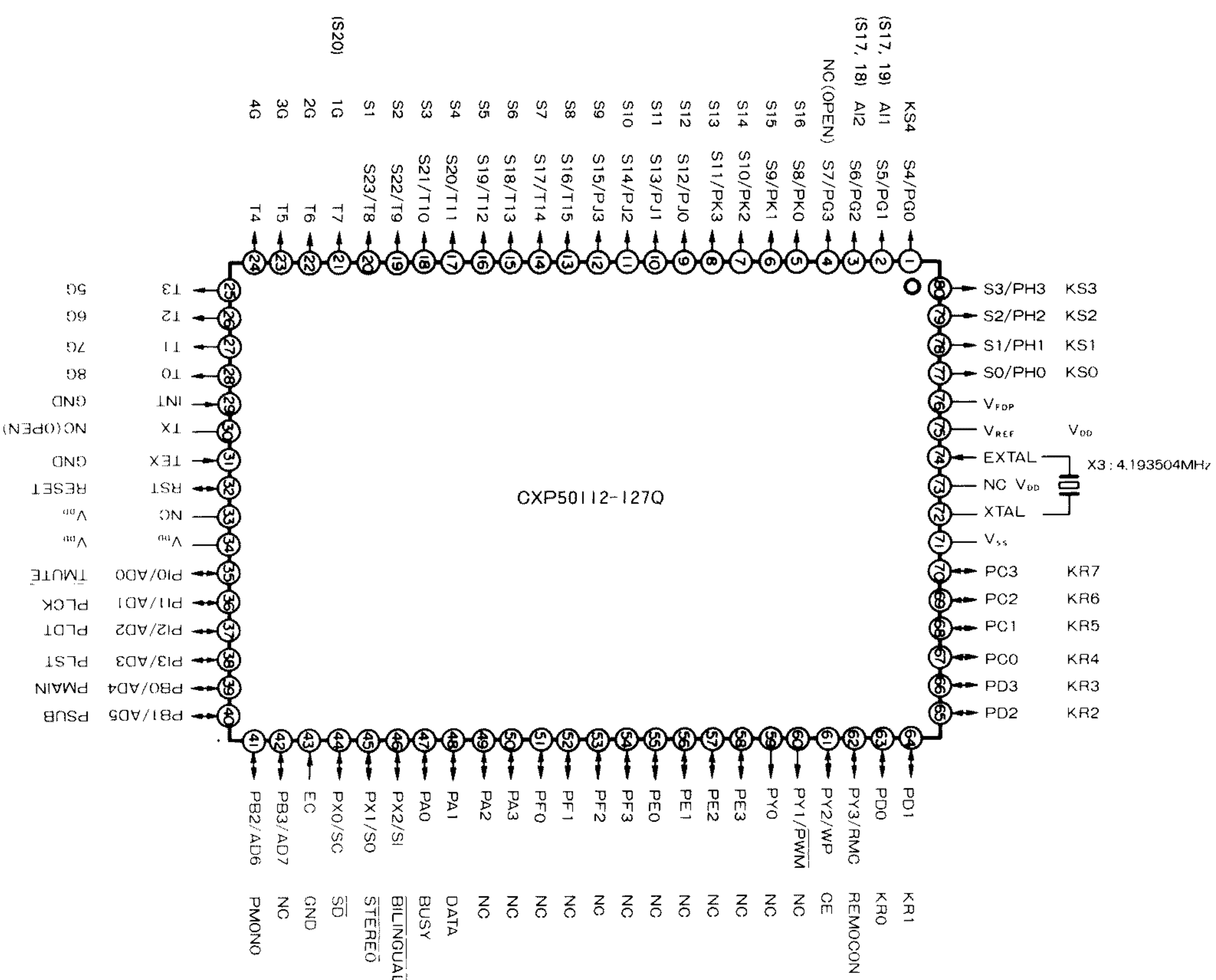
**Terminal connection diagram & key matrix connection**

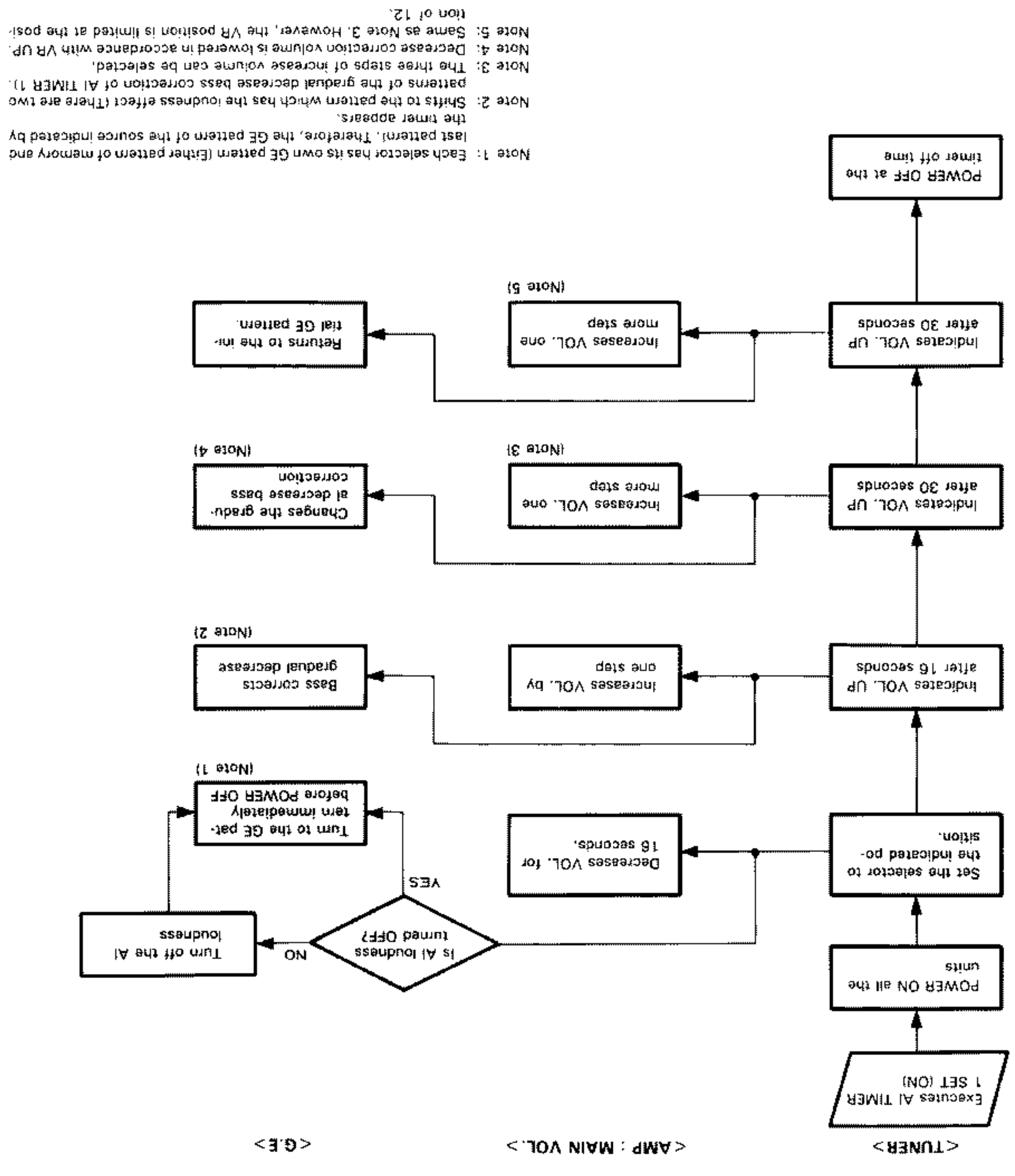
KEY MATRIX



CIRCUIT DESCRIPTION

**Pin connections**



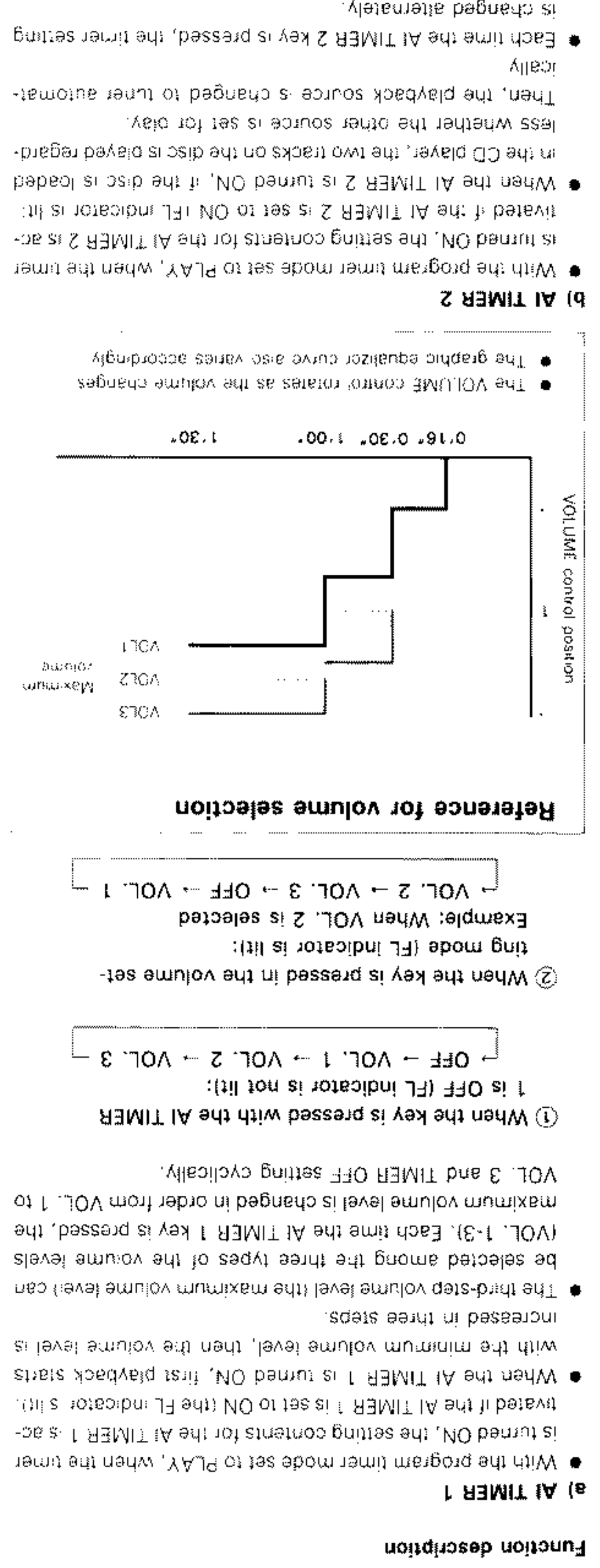


② Indication flow of AI TIMER 1

CIRCUIT DESCRIPTION

Pin No.	Pin name	I/O	Symbol	Description
1	S4/FG0	O	KS4	Key scan output
2	S5/FG1	O	A11	A11 ON/OFF FL segment output (S17, 19)
3	S6/FG2	O	A12	A12 ON/OFF FL segment output (S17, 18)
4	S7/FG3	NC		
5	S8/PK0	O	S8	FL segment output
6	S9/PK1	O	S9	FL segment output
7	S10/PK2	O	S10	FL segment output
8	S11/PK3	O	S11	FL segment output
9	S12/PJ0	O	S12	FL segment output
10	S13/PJ1	O	S13	FL segment output
11	S14/PJ2	O	S14	FL segment output
12	S15/PJ3	O	S15	FL segment output
13	S16/TJ4	O	S16	FL segment output
14	S17/TJ4	O	S17	FL segment output
15	S18/TJ3	O	S18	FL segment output
16	S19/TJ2	O	S19	FL segment output
17	S20/TJ1	O	S20	FL segment output
18	S21/TJ0	O	S21	FL segment output
19	S22/TJ9	O	S22	FL segment output
20	S23/TJ8	O	S23	FL segment output
21	T7	O	T7	FL gnd output
22	T6	O	T6	FL gnd output
23	T5	O	T5	FL gnd output
24	T4	O	T4	FL gnd output
25	T3	O	T3	FL gnd output
26	T2	O	T2	FL gnd output
27	T1	O	T1	FL gnd output
28	T0	O	T0	FL gnd output
29	INT	I	INT	External interrupt pin ... unused
30	TX	O	TX	Timer oscillation pin ... unused
31	TEX	I	TEX	Timer oscillation pin ... unused
32	RST	I	RESET	Reset input
33	NC		NC	
34	VDD			Power supply pin
35	PIO/AD0	O	TMUTE	Mute output
36	PI1/AD1	O	PLCK	Click to PLL or extension IC
37	PI2/AD2	O	PLDT	Data output to PLL or extension IC
38	PI3/AD3	O	PLST	Chip enable output for PLL
39	PB0/AD4	O	PMAIN	TV sound MPX selection output
40	PB1/AD5	O	PSUB	TV sound MPX selection output
41	PB2/AD6	O	PMONO	Stereo/monaural selection
42	PB3/AD7	O	NC	Event counter input ... unused
43	EC	I	EC	Event counter input ... unused
44	PX0/SC	I	SB	Tuning signal input
45	PX1/S0	I	ST	Stereo signal input

CIRCUIT DESCRIPTION

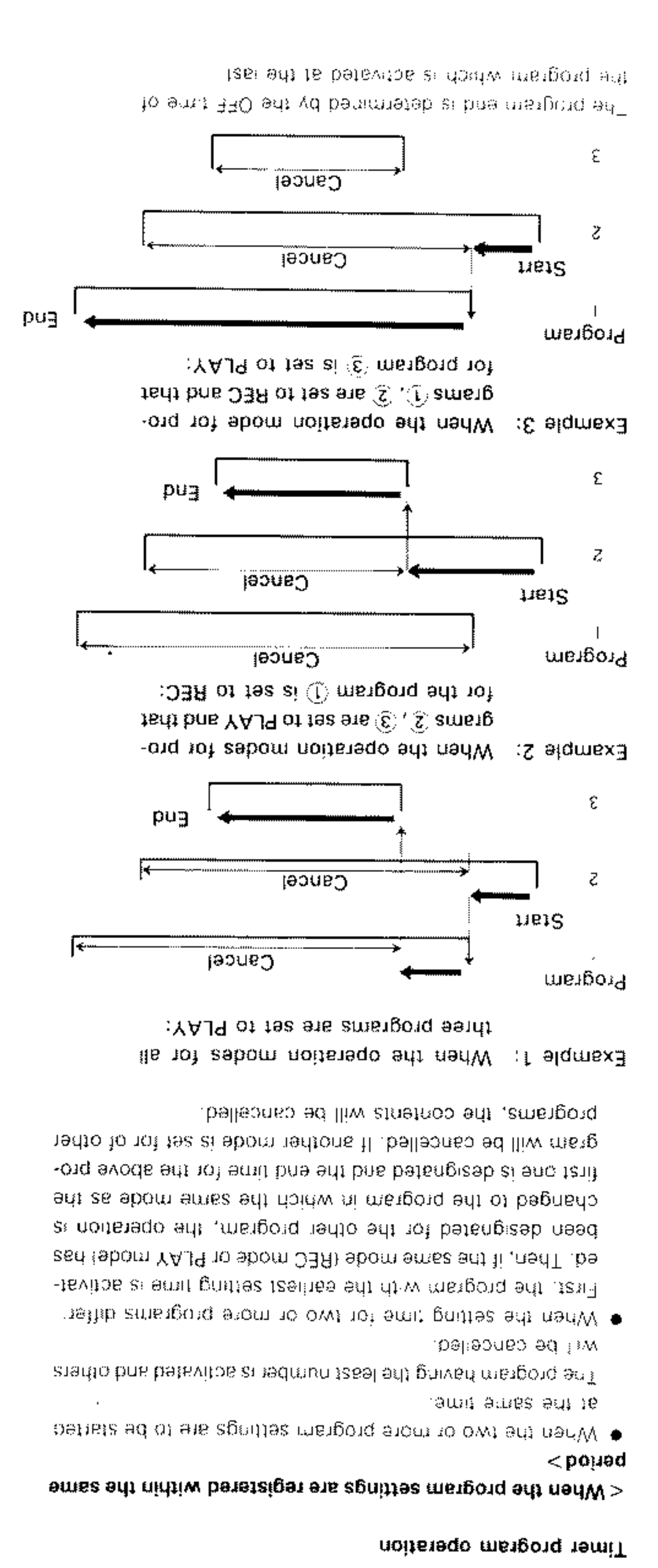


Function description

CIRCUIT DESCRIPTION

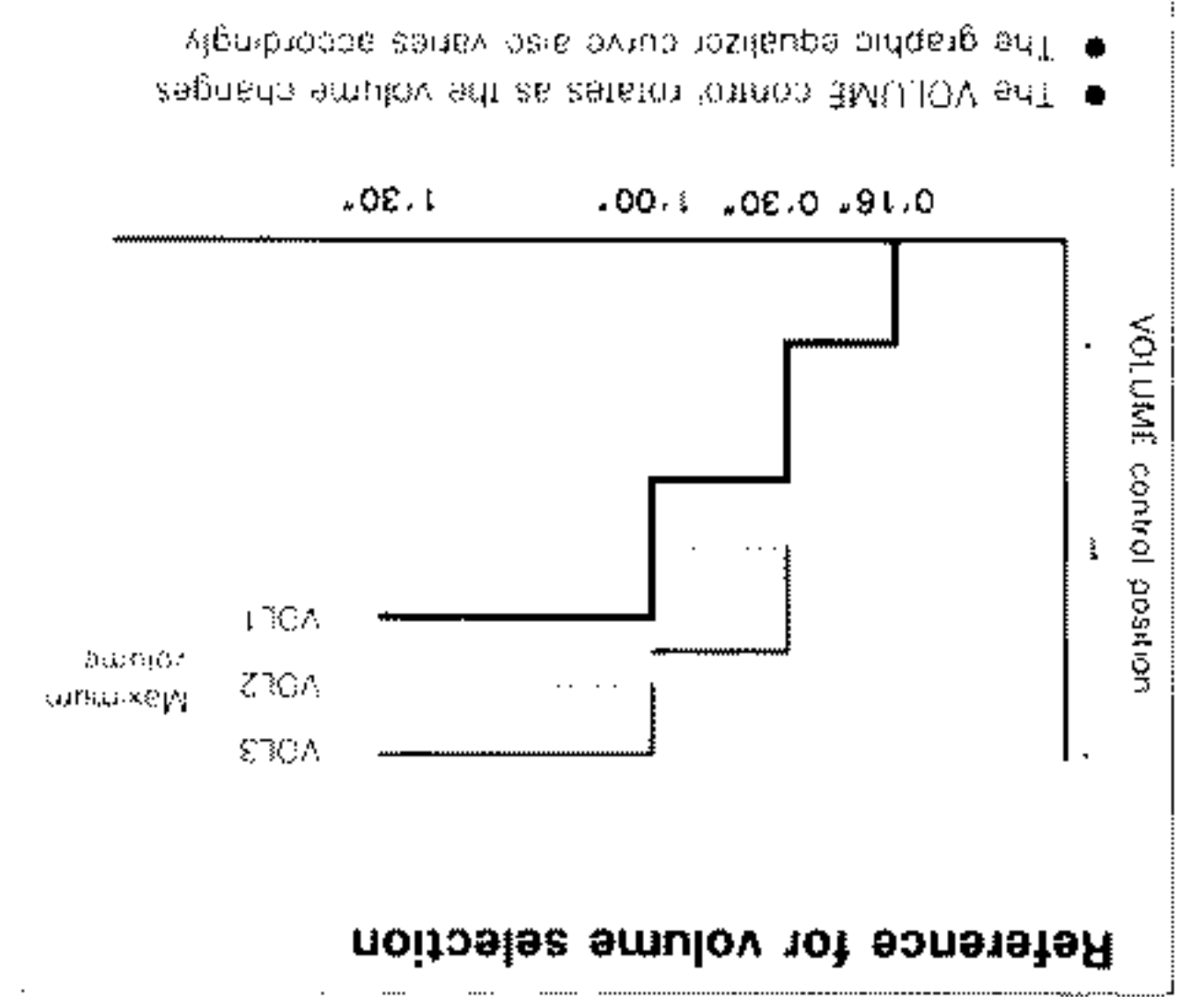
Pin No.	Pin name	I/O	Symbol	Description
46	PX2/SI	I	BIL	Bilingual signal input
47	PA0	I/O	BUSY	System control busy
48	PA1	I/O	DATA	System control data
49	PA2	O	NC	
50	PA3	O	NC	
51	PA4	O	NC	
52	PF1	O	NC	
53	PF2	O	NC	
54	PF3	O	NC	
55	PE0	O	NC	
56	PE1	O	NC	
57	PE2	O	NC	
58	PE3	O	NC	
59	PA0	O	NC	
60	PY1/PWM	O	NC	
61	CE	I	CE	AC ON/OFF detection input
62	PY3/RMC	I	RMCN	Remote control input
63	PA0	I	KR0	Key return input
64	PD1	I	KR1	Key return input
65	PD2	I	KR2	Key return input
66	PD3	I	KR3	Key return input
67	PC0	I	KR4	Key return input
68	PC1	I	KR5	Key return input
69	PC2	I	KR6	Key return input
70	PC3	I	KR7	Key return input
71	VSS		XTAL	GND pin
72	XTAL	O	XTAL	For oscillator
73	NC			For oscillator
74	EXTAL	I	EXTAL	For oscillator
75	VHF		VHF	For voltage detection reset... unused
76	VDP		VDP	FL terminal pull-down resistor power supply
77	SO/PH0	O	KSO	Key scan output
78	SI/PH1	O	KSI	Key scan output
79	SZ/PH2	O	KSZ	Key scan output
80	S3/PH3	O	KS3	Key scan output

CIRCUIT DESCRIPTION



Timer program operation

- With the program timer mode set to PLAY, when the timer is turned ON, the setting contents for the AI TIMER 1 is activated if the AI TIMER 1 is set to ON (the FL indicator is lit).
- When the AI TIMER 1 is turned ON, first playback starts with the minimum volume level, then the volume level is increased in three steps.
- The third-step volume level (the maximum volume level) can be selected among the three types of the volume levels (VOL. 1-3). Each time the AI TIMER 1 key is pressed, the maximum volume level is changed in order from VOL. 1 to VOL. 3 and TIMER OFF setting cyclically.
- When the key is pressed with the AI TIMER 1 is OFF (FL indicator is not lit):  
 ① OFF ← VOL. 1 ← VOL. 2 ← VOL. 3  
 ② When the key is pressed in the volume setting mode (FL indicator is lit):  
 Example: When VOL. 2 is selected  
 VOL. 2 ← VOL. 3 ← OFF ← VOL. 1



● The VOLUME control curve also varies accordingly.

● Each time the AI TIMER 2 key is pressed, the timer setting is changed alternately.

● With the program timer mode set to PLAY, when the timer is turned ON, the setting contents for the AI TIMER 2 is activated if the AI TIMER 2 is set to ON (FL indicator is lit).

● When the AI TIMER 2 is turned ON, if the disc is loaded in the CD player, the two tracks on the disc is played regardless whether the other source is set for play. Then, the playback source is changed to tuner automatically.

● Each time the AI TIMER 2 key is pressed, the timer setting is changed alternately.

Destination type	Destination switches				Band	Receiving frequency range	Intermediate frequency	PLL reference frequency
	B3	B2	B1	B0				
M.V.	1	1	0	0	FM	87.5 - 108.0 MHz	100 kHz	10 kHz
J	0	0	0	0	FM	76.0 - 90.0 MHz	100 kHz	10 kHz
					AM	531 - 1602 kHz	9 kHz	450 kHz
K.P.	1	0	0	0	FM	87.5 - 108.0 MHz	100 kHz	10 kHz
					AM	530 - 1610 kHz	10 kHz	450 kHz
X	1	1	0	0	FM	87.5 - 108.0 MHz	50 kHz	10.7 MHz
					AM	531 - 1602 kHz	9 kHz	450 kHz
T.E.	1	1	1	0	FM	87.5 - 108.0 MHz	50 kHz	10.7 MHz
					AM	531 - 1602 kHz	9 kHz	450 kHz
					FM	153 - 281 kHz	1 kHz	1 kHz

Conditions by destination

Band	Destination		Receiving frequency range	Intermediate frequency	PLL reference frequency
	J	K.P., M., X			
FM	1	1	87.5 MHz	100 kHz	10 kHz
	2	1	89.1 MHz	106.0 MHz	106.0 MHz
	3	1	90.0 MHz	108.0 MHz	108.0 MHz
	4	1	92.0 MHz	106.0 MHz	106.0 MHz
	5	1	94.0 MHz	106.0 MHz	106.0 MHz
	6	1	98.0 MHz	106.0 MHz	106.0 MHz
	7	1	100.1 MHz	100.1 MHz	100.1 MHz
	8	1	102.0 MHz	102.0 MHz	102.0 MHz
	9	1	106.0 MHz	106.0 MHz	106.0 MHz
	10	1	108.0 MHz	108.0 MHz	108.0 MHz
AM	1	1	531 kHz	530 kHz	531 kHz
	2	1	630 kHz	630 kHz	630 kHz
	3	1	990 kHz	990 kHz	990 kHz
	4	1	1440 kHz	1440 kHz	1440 kHz
	5	1	1610 kHz	1610 kHz	1602 kHz
	6	1	1700 kHz	1700 kHz	1700 kHz
	7	1	1700 kHz	1700 kHz	1700 kHz
	8	1	1700 kHz	1700 kHz	1700 kHz
	9	1	1700 kHz	1700 kHz	1700 kHz
	10	1	1700 kHz	1700 kHz	1700 kHz
TV/LW	1	1	153 kHz	1 kHz	1 kHz
	2	1	162 kHz	1 kHz	1 kHz
	3	1	216 kHz	1 kHz	1 kHz
	4	1	270 kHz	1 kHz	1 kHz
	5	1	281 kHz	1 kHz	1 kHz
	6	1	12ch	1 kHz	1 kHz
	7	1	13ch	1 kHz	1 kHz
	8	1	35ch	1 kHz	1 kHz
	9	1	62ch	1 kHz	1 kHz
	10	1	62ch	1 kHz	1 kHz

(Table 1)

**(1) Setting method**  
Insert the AC plug into an outlet and remove your fingers from DOWN key at the same time while pressing DOWN key.

**(2) Contents**  
POWER ON  
All the FLS turned on  
Test Frequency Setting (Table 1)

**(3) Clearing method**  
All the turned on FLS can be cleared with ten keys, BAND key, UP/DOWN key or POWER key.

**(1) Method**  
Setting of initial conditions (reset)

**(2) Contents**  
While pressing ENTER key, turn the AC ON.

**(2) Contents**  
Clears all the memory and returns to the initial conditions.  
However, the test frequency is newly memorized in the preset memory at this time. (The same as when the back-up data is NG.)

CIRCUIT DESCRIPTION

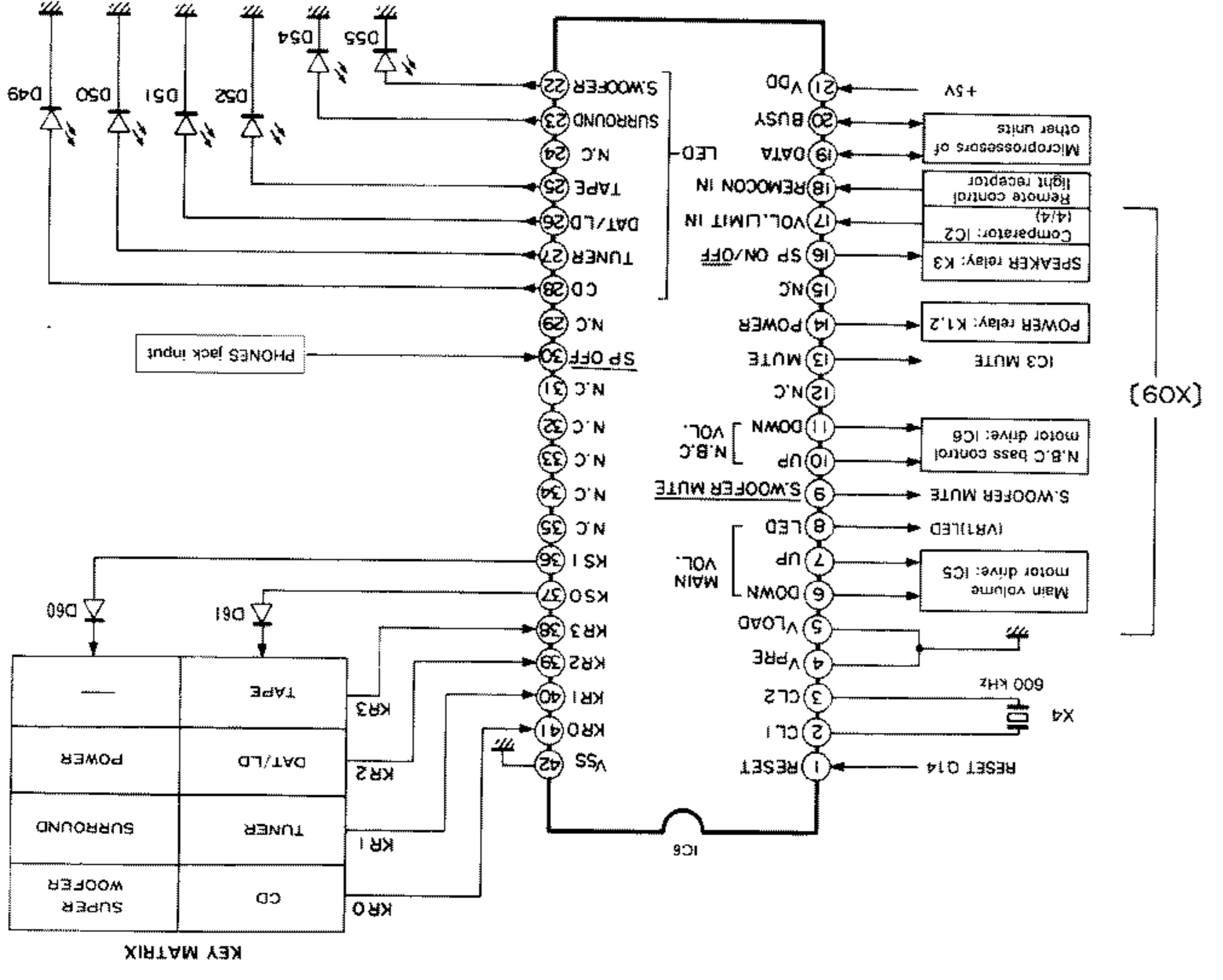
A-711/711L

Pin No.	Pin name	I/O	Description
1	RESET	I	Reset input (H: Reset)
2	CL1	I	System clock terminal
3	CL2	I	System clock terminal
4	Vcc4	I	No use. (GND)
5	Vcc5	I	No use. (GND)
6	P53	O	Motor volume down drive
7	P52	O	Motor volume up drive
8	P51	O	Volume indicator LED drive
9	P50	O	Super woofer mute
10	P23	O	N.B. circuit volume up drive
11	P22	O	N.B. circuit volume down drive
12	P21/PTOUT	I	No use. (OPEN)
13	P103	O	MUTE
14	P102	O	POWER
15	P101	I	No use. (GND)
16	P100	O	Speaker ON/OFF conversion
17	P113	I	Volume position detection input
18	P112	I	VOL LIMIT IN
19	P111	I/O	DATA
20	P110	I/O	BUSY
21	Vcc6	I	Power supply pin
22	P93	O	S WOOFFER
23	P92	O	SURROUND
24	P91	I	No use. (OPEN)
25	P90	O	TAPE
26	P83	O	DATA/LD LED drive
27	P82	O	TUNER LED drive
28	P81	O	CD
29	P80	I	No use. (OPEN)
30	P43	I	Speaker OFF detection input
31	P42	I	No use. (GND)
32	P41	I	No use. (GND)
33	P40	I	No use. (GND)
34	P33	I	No use. (OPEN)
35	P32	I	No use. (OPEN)
36	P31	O	Key scan output signal 1
37	P30	O	Key scan output signal 0
38	P03/S1	I	Key return input signal 3
39	P02/S0	I	Key return input signal 2
40	P01/SCK	I	Key return input signal 1
41	P00/INTC	I	Key return input signal 0
42	VSS	I	GND pin

Pin functions

CIRCUIT DESCRIPTION

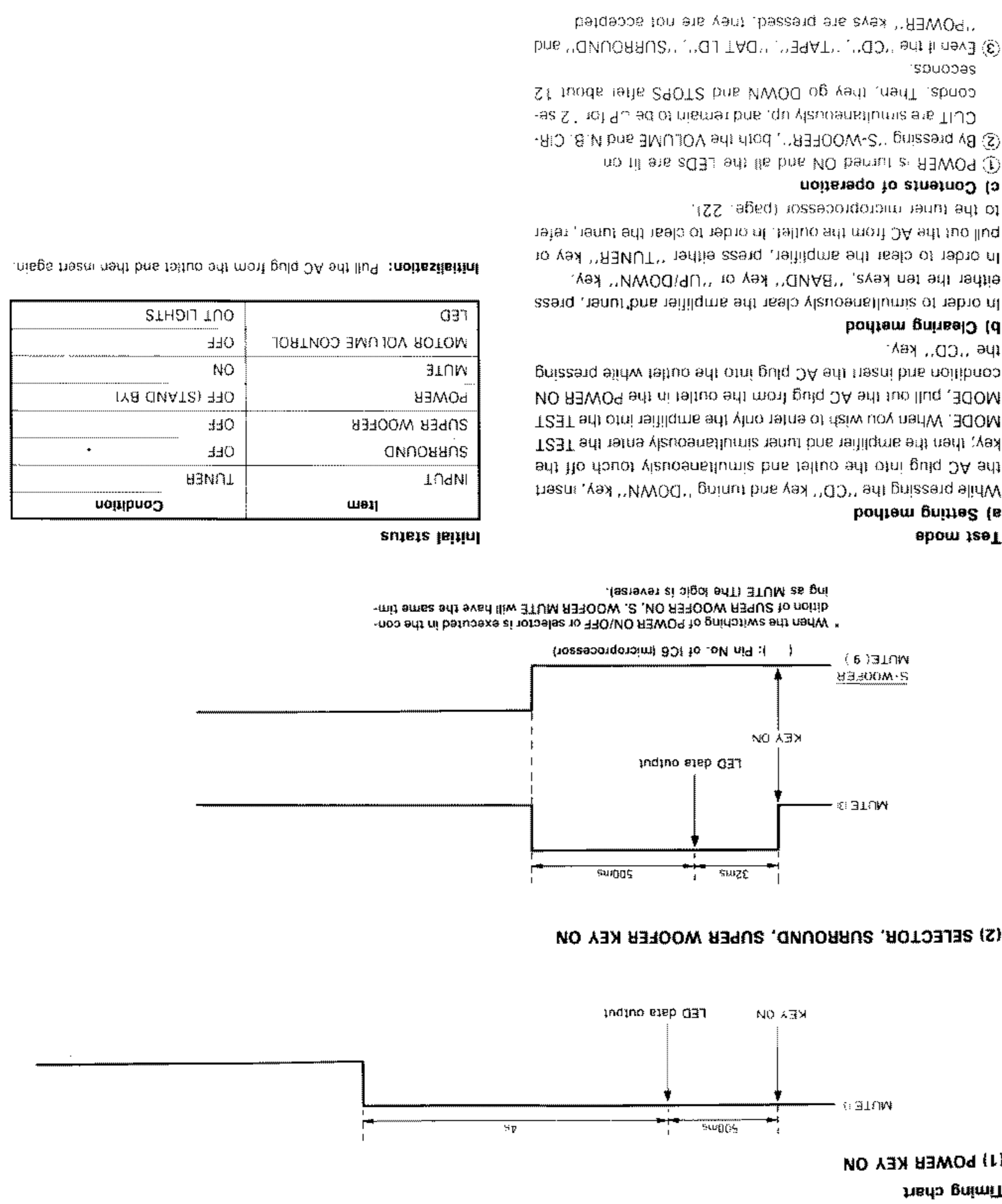
A-711/711L



Terminal connection diagram & key matrix connection  
IC6: #PD7538ACU-232 (X05-3992-71)  
AMP, microprocessor

CIRCUIT DESCRIPTION

A-711/711L



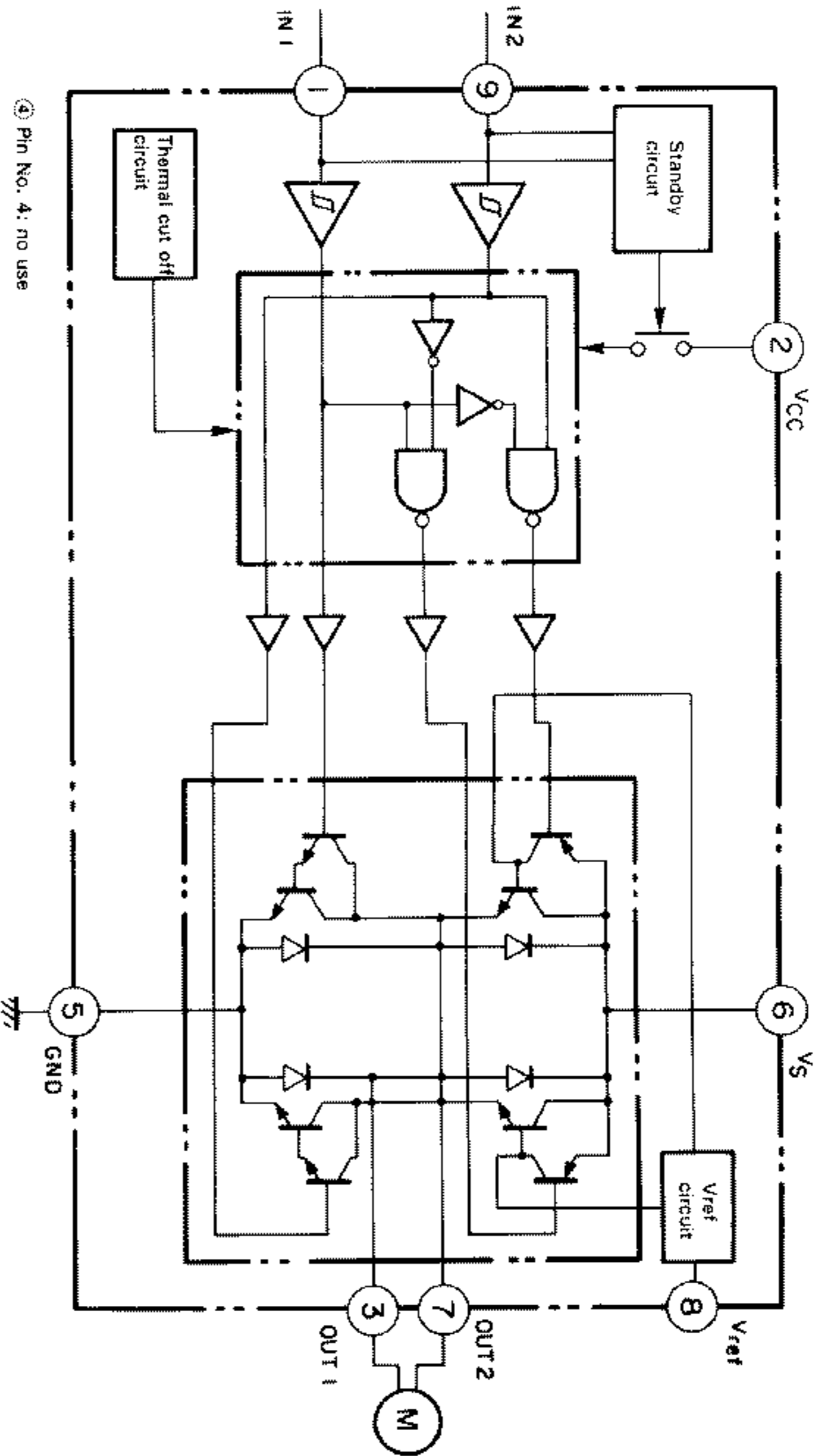
Timing chart

CIRCUIT DESCRIPTION

A-711/711L

IC5, 6: TA8409S (X09-3142-71)  
Volume motor drive IC

Block diagram



Truth table

INPUT	OUTPUT	MODE
IN 1	OUT 1	Pin No. of IC5, 6
IN 2	OUT 2	Motor mode
0	∞	STOP
0	L	CW
1	L	CCW
1	L	BRAKE

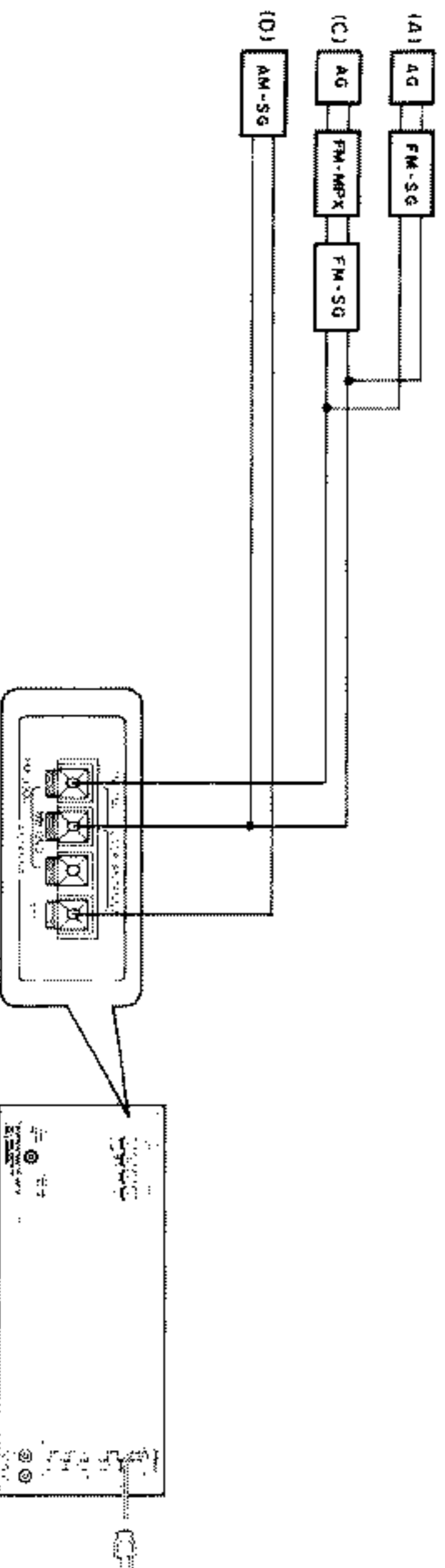
∞: High impedance  
Input "H": active

Tuner unit

† If alignment point is "...", confirm the value.  
‡ If not, replace the front-end pack and ICA433-PL3

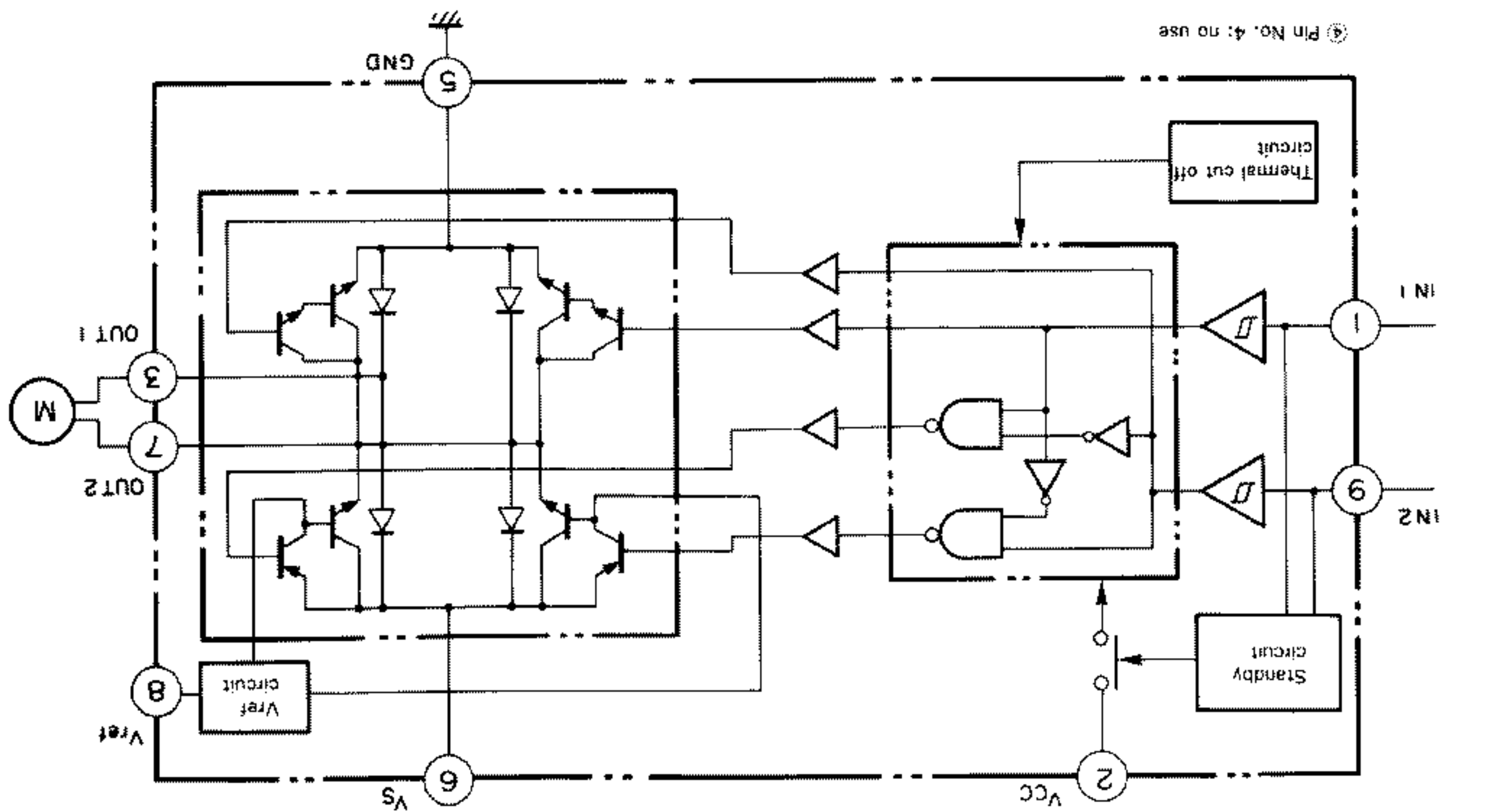
No.	ITEM	SETTING	REF. POINT	ALIGNMENT POINTS	ALIGN. P.N.	FIG.
1	BAND EDGE (1)	-	Connect a DC voltmeter between TP10(VT) and TP13(GND). Connect a DC voltmeter between TP10(VT) and TP13(GND).	RT 3MHz	1.6V	(a)
2	BAND EDGE (2)	-	Connect a DC voltmeter between TP10(VT) and TP13(GND).	10S 0MHz	8.0V	(a)
3	DISCRIMINATOR	98.0MHz 1kHz, 75kHz dev 600μA(I) (input)	Connect a DC voltmeter between TP11 and TP12.	AUTO or MONO 98.0MHz	0V	(b)
4	VCO	98.0MHz 0 dev 100dB(A) (input)	Connect a frequency counter between TP5 and GND.	AUTO 95MHz (X03)	13.0MHz	(c)
5	DISCRETION (STEREO)	1kHz, 56.25kHz dev P1:0.28, 75kHz dev S1:0.14μA(I) (input)	(D)	RF1 (X02)	Minimum distortion.	
6	SEPARATION (E.J. type only)	98.0MHz Stereo signal 600μA(I) (input)	(D)	VR3 (X03)	Minimum cross-talk.	
7	TUNING LEVEL	98.0MHz 9 dev 140dB(A) (input), 750	Keep the AM loop antenna installed. (D)	VR1 (X02)	Adjust VR1 and stop at the point where B(LITEN) goes on.	
AM-MW SELECTION						
(1)	BAND EDGE (1)	-	Connect a DC voltmeter between TP10(VT) and TP13(GND). Connect a DC voltmeter between TP10(VT) and TP13(GND).	530kHz (S1)1kHz	1.3V	(a)
(2)	BAND EDGE (2)	-	Connect a DC voltmeter between TP10(VT) and TP13(GND).	1810kHz (S2)2kHz	1.0V	(a)
(3)	RF ALIGNMENT	990kHz 400Hz, 30% mod 340μA(I) (input)	(D)	990kHz BLACK (X03)	Maximum amplitude and symmetry of the oscilloscope display.	
AM-LW SELECTION (E.J. type only)						
(4)	BAND EDGE (1)	-	Connect a DC voltmeter between TP10(VT) and TP13(GND). Connect a DC voltmeter between TP10(VT) and TP13(GND).	153kHz	2.3V	(a)
(5)	BAND EDGE (2)	-	Repeat alignments (4) and (5) several times.	281kHz	1.0V	(a)
(6)	RF ALIGNMENT	215kHz 100Hz, 50% mod 330μA(I) (input)	(D)	EL 85.4kHz (X03)	Maximum amplitude and symmetry of the oscilloscope display.	

Connection



Truth table

MODE	INPUT	OUTPUT
Motor mode	IN 1	OUT 1
	IN 2	OUT 2
	IN 1	OUT 2
	IN 2	OUT 1
STOP	∞	∞
CCW	L	L
CCW	L	L
High impedance	∞	∞



IC5, 6: TA8409S (X09-3142-71)  
Volume motor drive IC

CIRCUIT DESCRIPTION

A-711/711L

Note (a) As regards the positive (+) side of the frequency counter, arrange as short a distance as possible between pin 74 of IC5 and 1P of the input stage of the FET probe.

(1) If the timer accuracy is within the standard, replace X3 by the frequency counter; when the result of measurement at pin 74 (L77-1175-05) near the microprocessor IC on a printed board (X05-), change the constant of C99 in the crystal oscillation circuit of microprocessor IC5 and add a trimmer.

(2) Even if within the standard, for further improved accuracy, change the constant of C99 in the crystal oscillation circuit of microprocessor IC5 and add a trimmer.

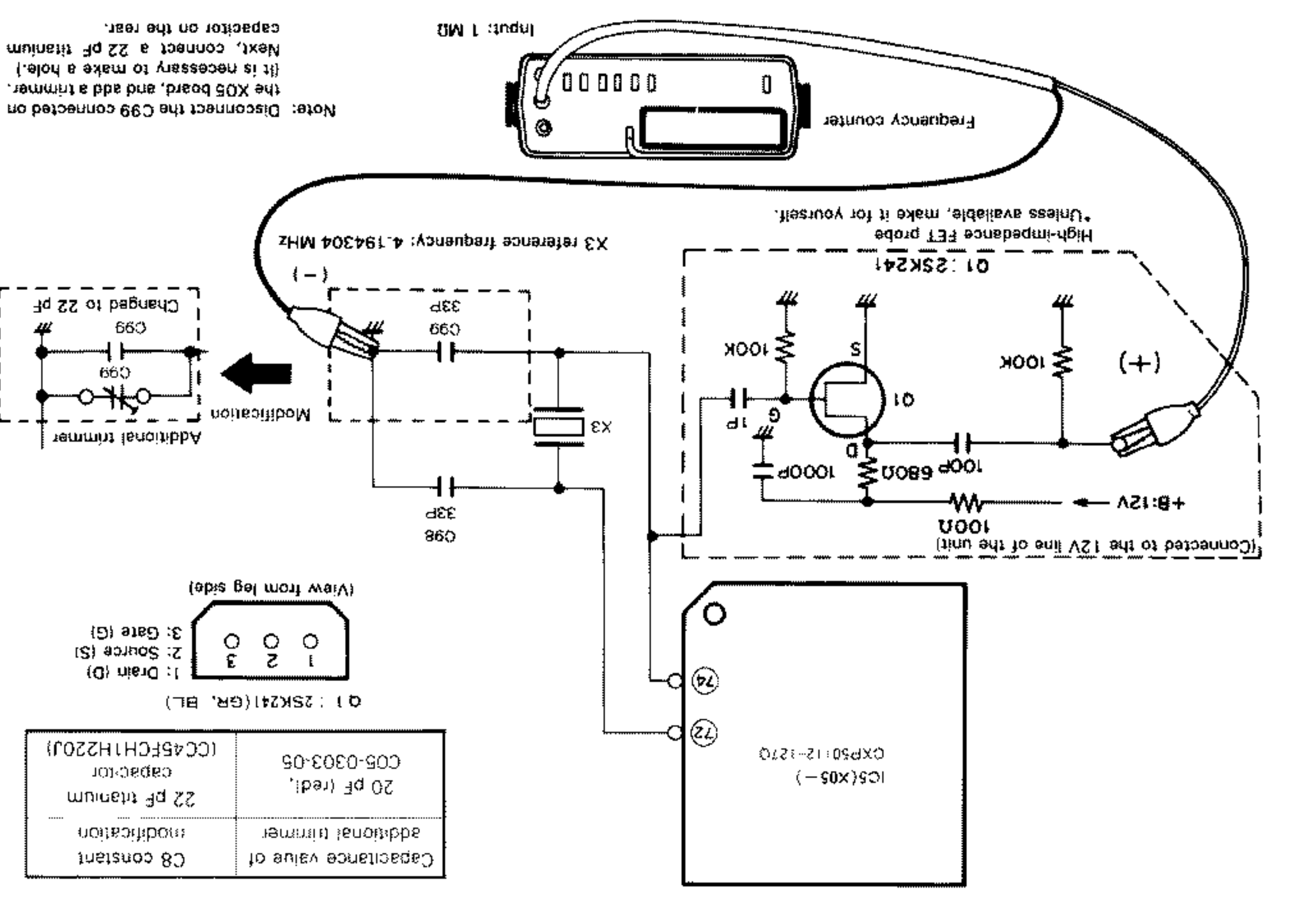
Adjustment method (Use a high-impedance buffer to avoid frequency deviation.)

Connect a high-accuracy frequency counter to pin 74 by way up to the first digit of the X3 reference frequency fully of the FET probe shown above, and adjust the frequency fully to the first digit of the X3 reference frequency 4,194,304 Hz. (Connect the negative (-) side of the frequency counter to the GND side of C99.)

Monthly error [sec] =  $\frac{1}{f_0} \times \text{the number of seconds taken for one month}$

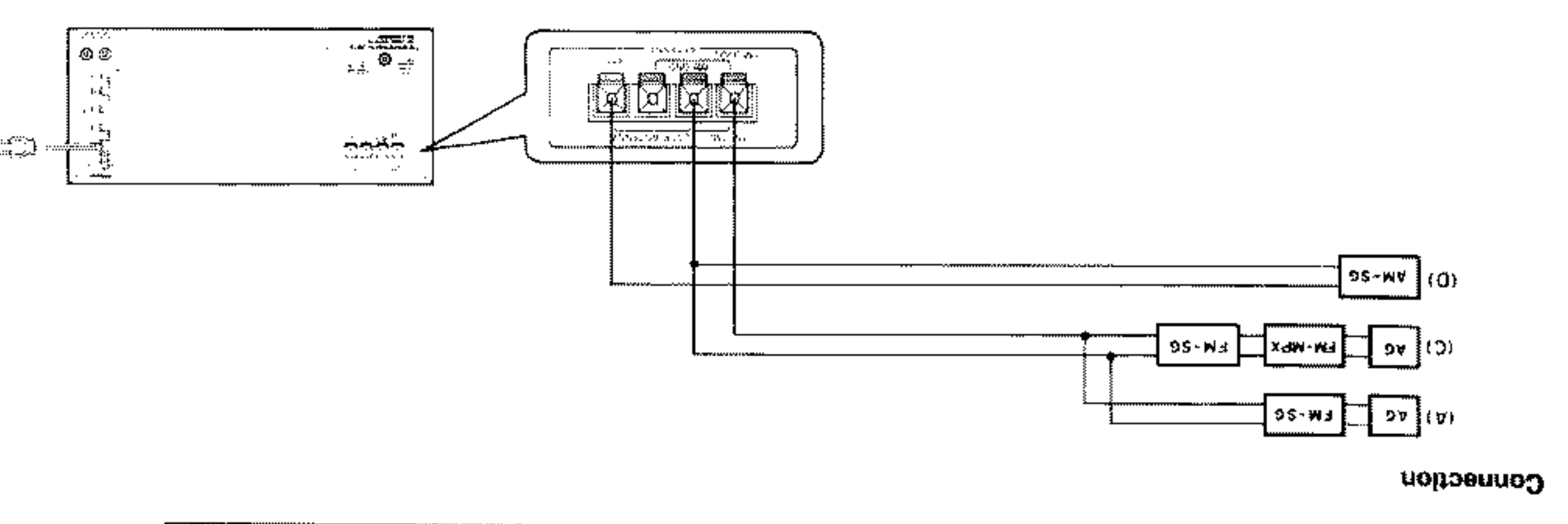
Example: Reference frequency  $f_0 = 4,194,304$  [Hz]  
 Monthly error [sec] =  $\frac{1}{4,194,304} \times 4,194,304 = 1$  [sec]

\* A minus value as the monthly error means a loss.



ADJUSTMENT

A-711/711L



Pin No.	Function	Setting	Adjustment Method
1	START	87.5MHz	Connect a DC voltmeter between TP10(Y1) and TP10(X1).
2	STOP	87.5MHz	Connect a DC voltmeter between TP10(Y1) and TP10(X1).
3	DISMINUATOR	148.75MHz	Connect a DC voltmeter between TP10(Y1) and TP10(X1).
4	VCO	98.0MHz	Connect a frequency counter between TP8 and GND.
5	DISTORTION	148.75MHz	Adjust the distortion of the FET probe.
6	SEPARATION	98.0MHz	Adjust the separation of the FET probe.
7	TUNING LEVEL	98.0MHz	Adjust the tuning level of the FET probe.
8	ATTN	98.0MHz	Adjust the attn of the FET probe.
9	ATTN	98.0MHz	Adjust the attn of the FET probe.

Tuner unit

ADJUSTMENT

A-711/711L

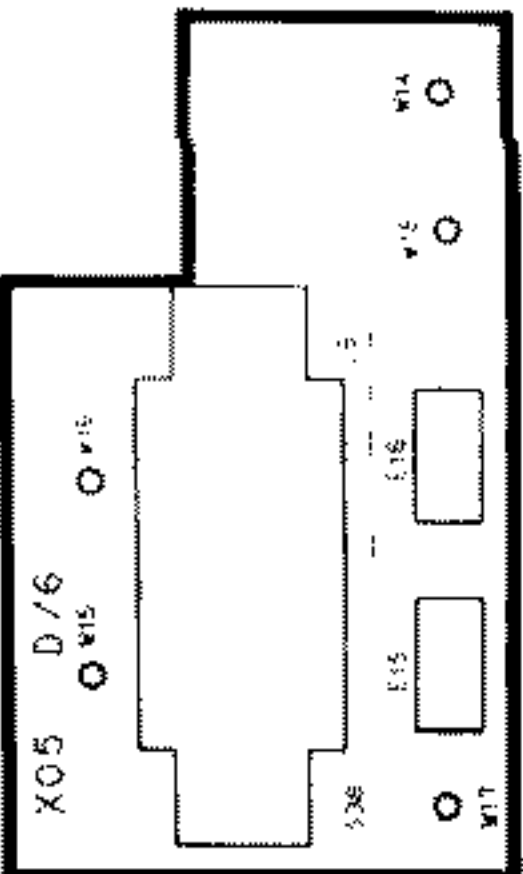
VOLTAGE TABLES

Pin No.	Function	Setting	Adjustment Method
1	START	87.5MHz	Connect a DC voltmeter between TP10(Y1) and TP10(X1).
2	STOP	87.5MHz	Connect a DC voltmeter between TP10(Y1) and TP10(X1).
3	DISMINUATOR	148.75MHz	Connect a DC voltmeter between TP10(Y1) and TP10(X1).
4	VCO	98.0MHz	Connect a frequency counter between TP8 and GND.
5	DISTORTION	148.75MHz	Adjust the distortion of the FET probe.
6	SEPARATION	98.0MHz	Adjust the separation of the FET probe.
7	TUNING LEVEL	98.0MHz	Adjust the tuning level of the FET probe.
8	ATTN	98.0MHz	Adjust the attn of the FET probe.
9	ATTN	98.0MHz	Adjust the attn of the FET probe.

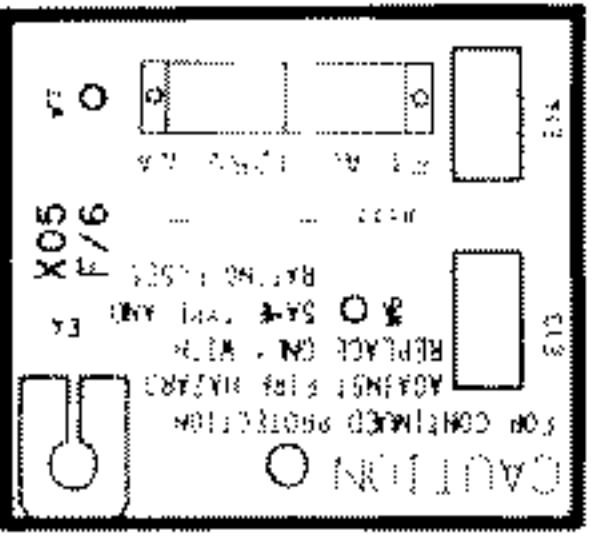


# PC BOARD (Component side view)

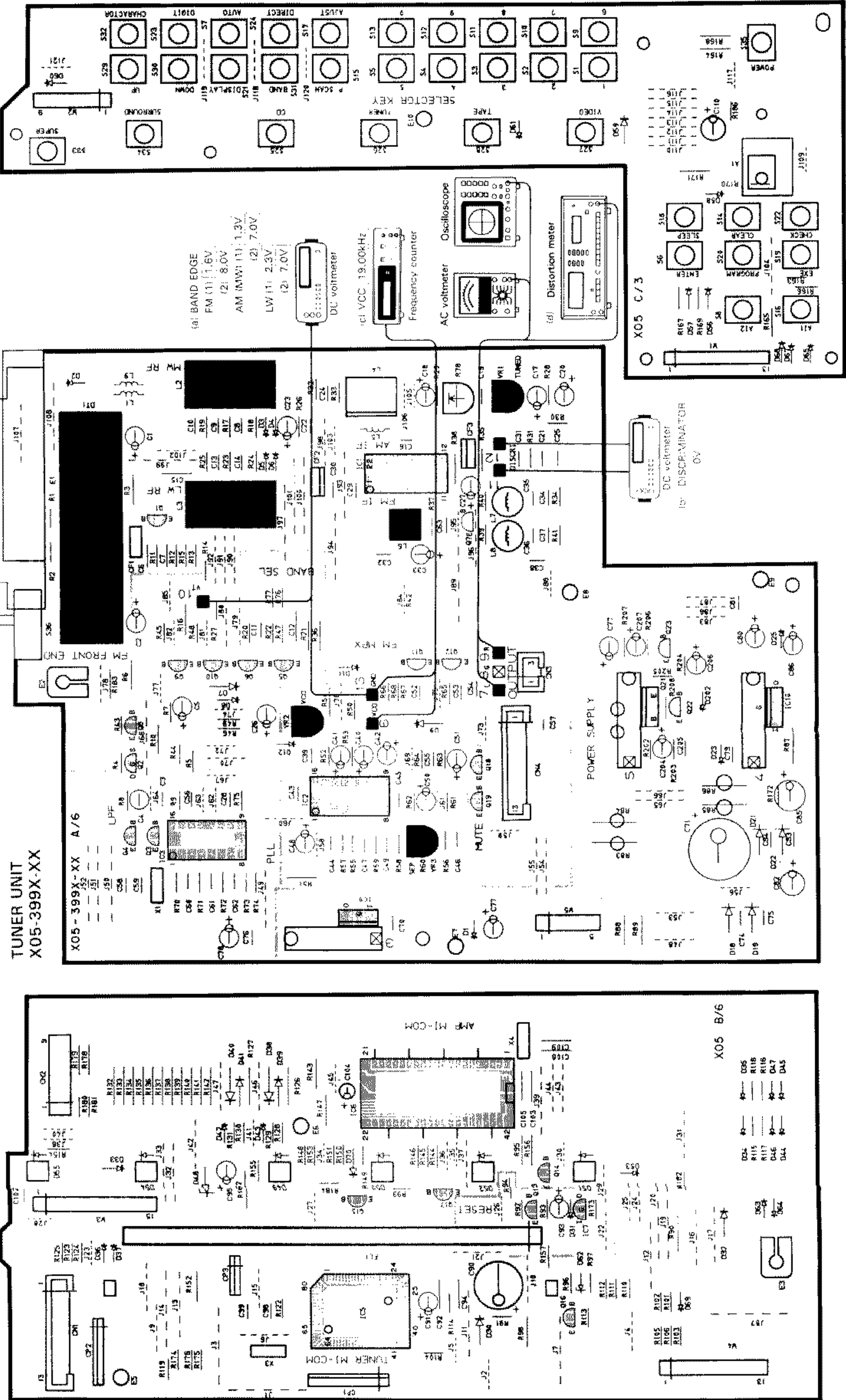
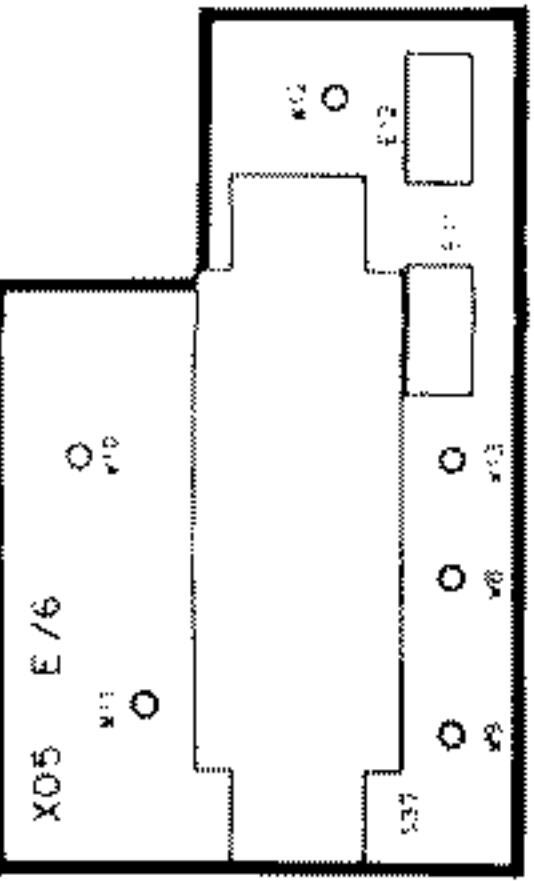
(Y) TYPE



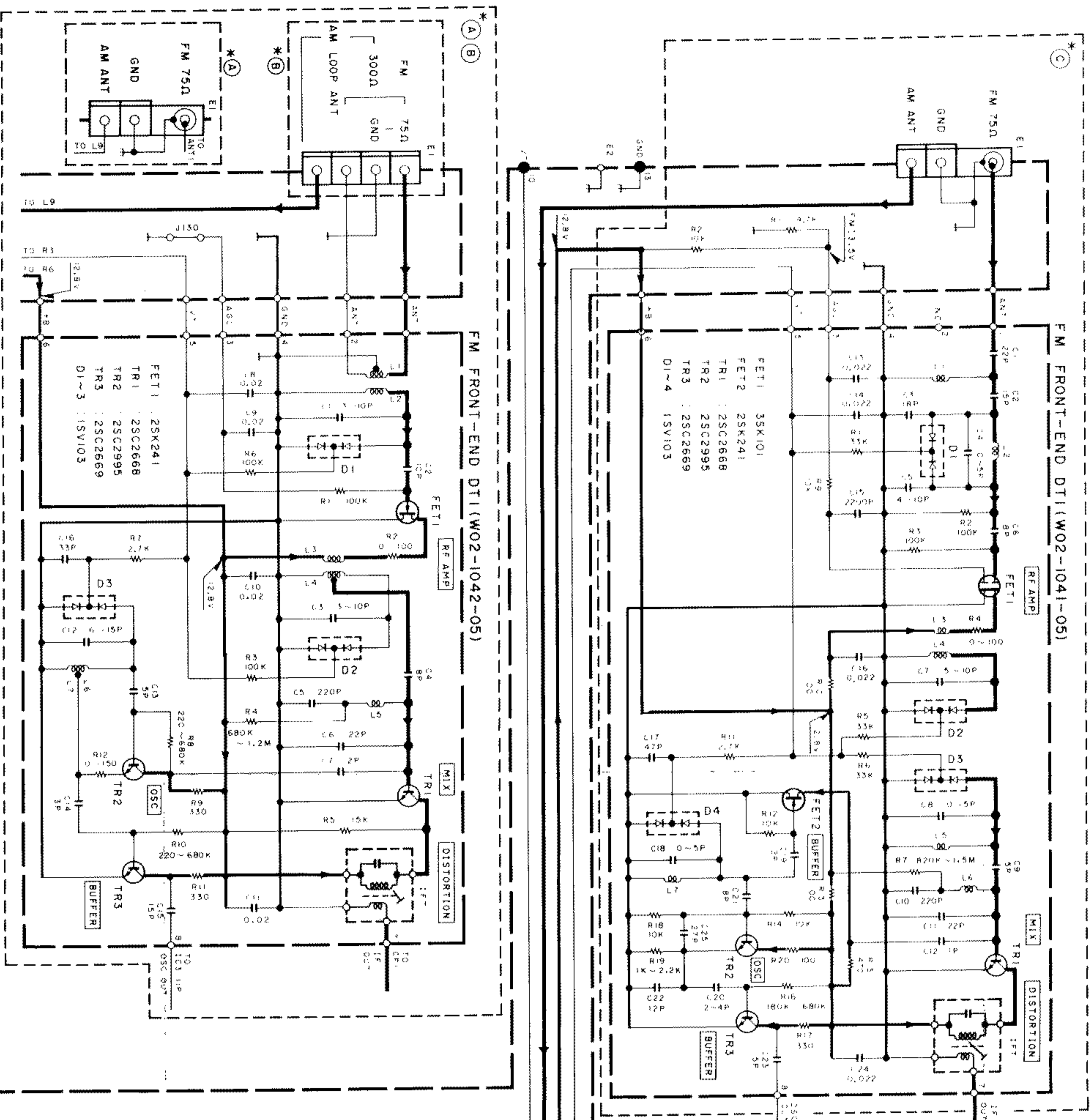
(K, P) TYPE



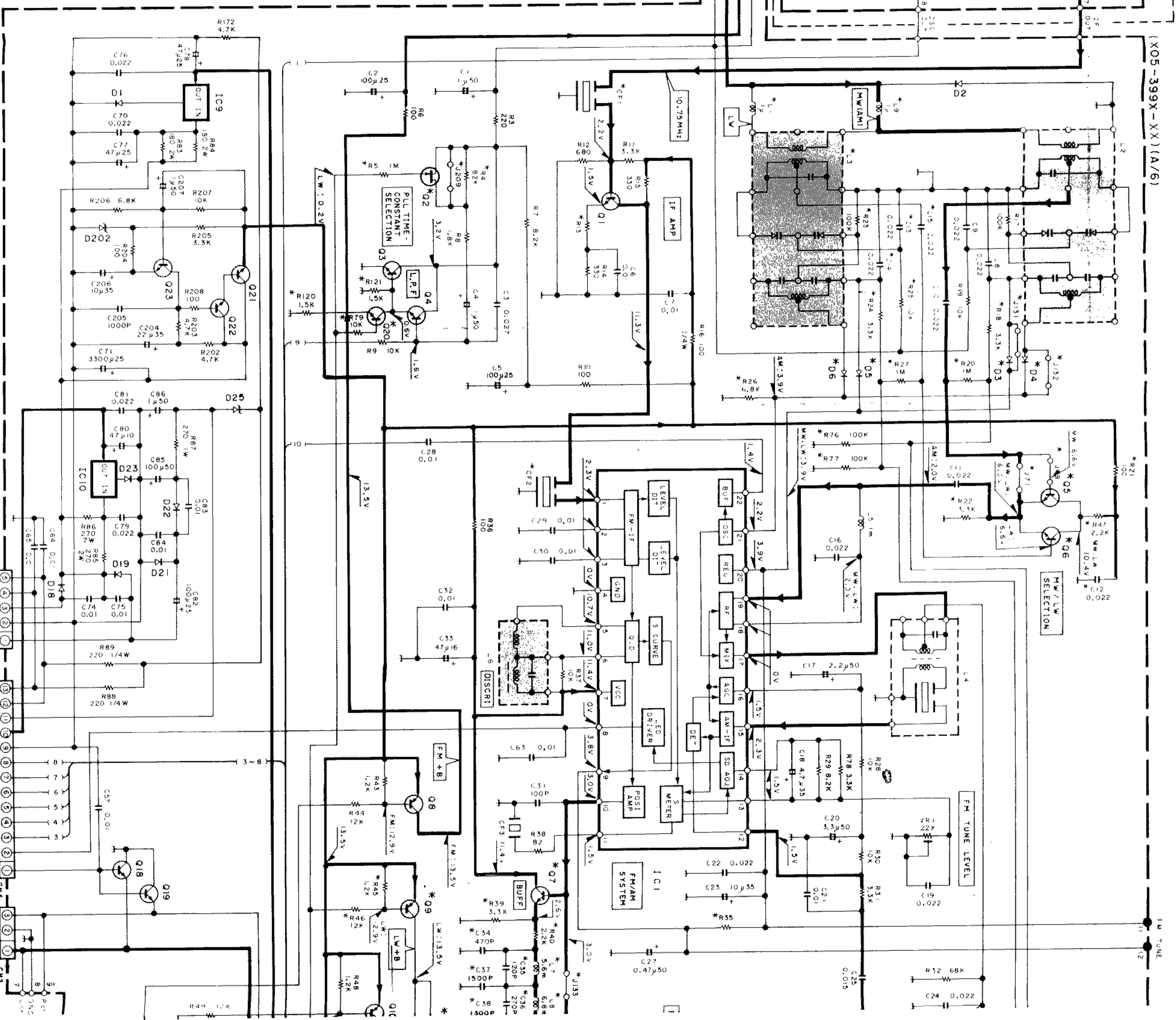
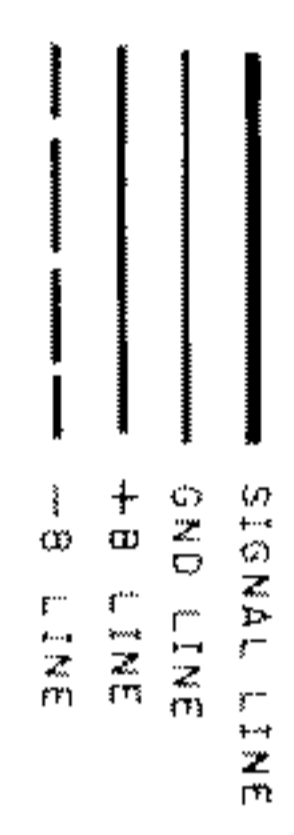
(M) TYPE





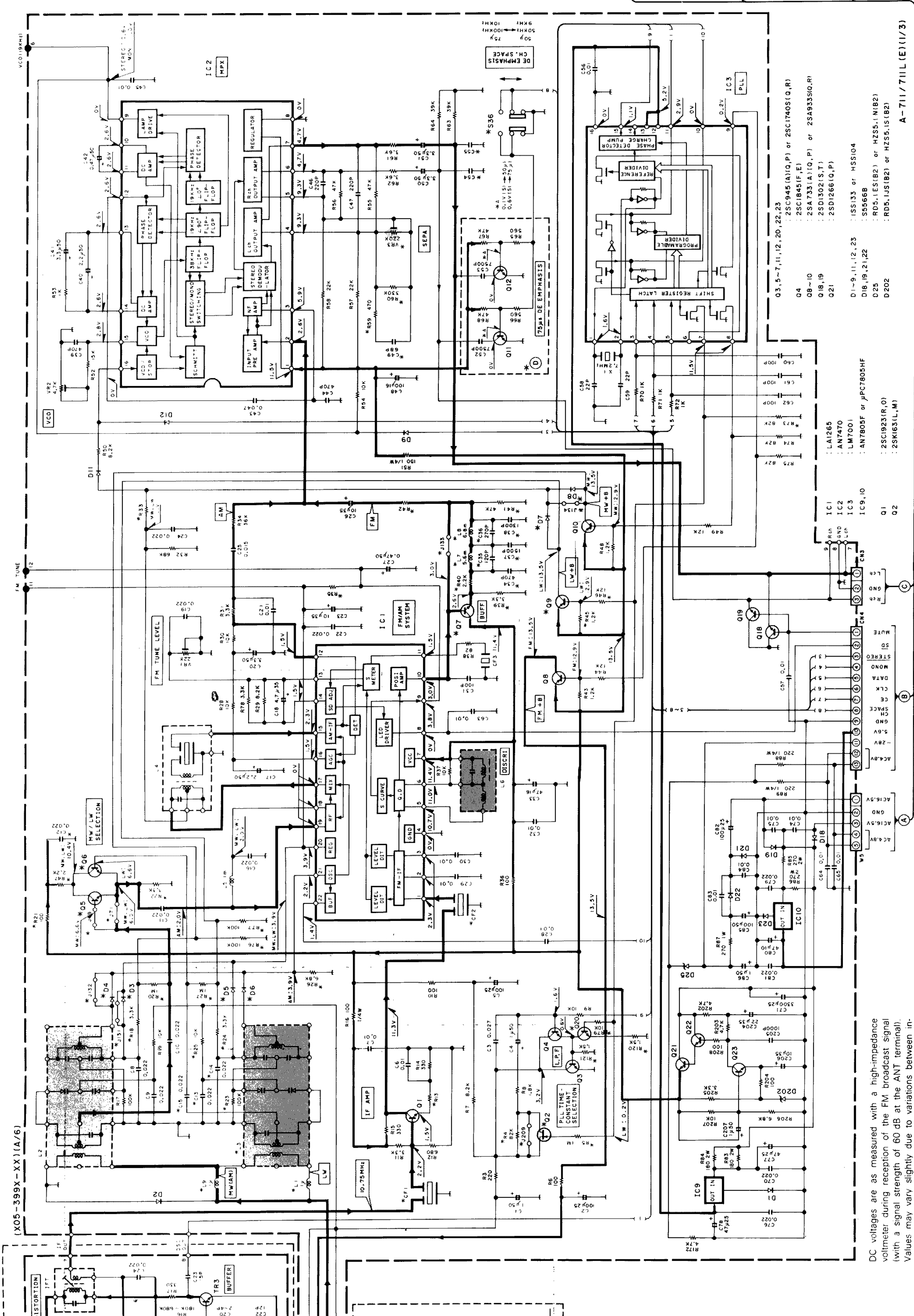


DESTINATION COUNTRY	UNIT NAME	RA	R13	R33	R42	R60	C12-15	C34	L13	L9	Q2, Q3	Q3	Q4	Q5-7	Q8	Q35
ENGLAND	T X05-3992-71	NO	NO	YES	NO	82K	YES	YES	22	3.3K	39K	NO	YES	NO	YES	16K
AUSTRIA, I.A.	K X05-3990-71	NO	YES	NO	NO	1.2K	NO	NO	4.7K	33K	YES	NO	NO	NO	NO	5K
GENERAL MARKET	M X05-3990-21	YES	NO	NO	NO	1.2K	NO	NO	4.7K	33K	YES	NO	NO	NO	NO	5K
PK	X05-3992-9	YES	NO	NO	NO	1.2K	NO	NO	4.7K	33K	YES	NO	NO	NO	NO	5K
U.S.A.	K X05-3990-10	NO	YES	NO	NO	23K	NO	NO	4.7K	33K	YES	NO	NO	NO	NO	5K
CANADA	K X05-3990-10	NO	YES	NO	NO	23K	NO	NO	4.7K	33K	YES	NO	NO	NO	NO	5K
FR	V93	336	171	132, 134	155	154	154	154	154	154	154	154	154	154	154	154
-72-0386-05	YES	NO	NO	YES	NO	YES	NO	NO	YES	NO	YES	NO	NO	NO	NO	NO
-72-0387-05	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-72-0388-05	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-72-0391-05	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
-72-0393-05	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal with a signal strength of 60 dB at the ANT terminal. Values may vary slightly due to variations between individual instruments of and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).



(X05-399X-XX)(A/6)

FM TUNE

VCO (FM/AM)

X09-A/5-W1  
3/3

(C)

X05-B/6-W4  
2/3

(B)

TO TRANSFORMER  
3/3

(A)

A-711/711L (1/3)

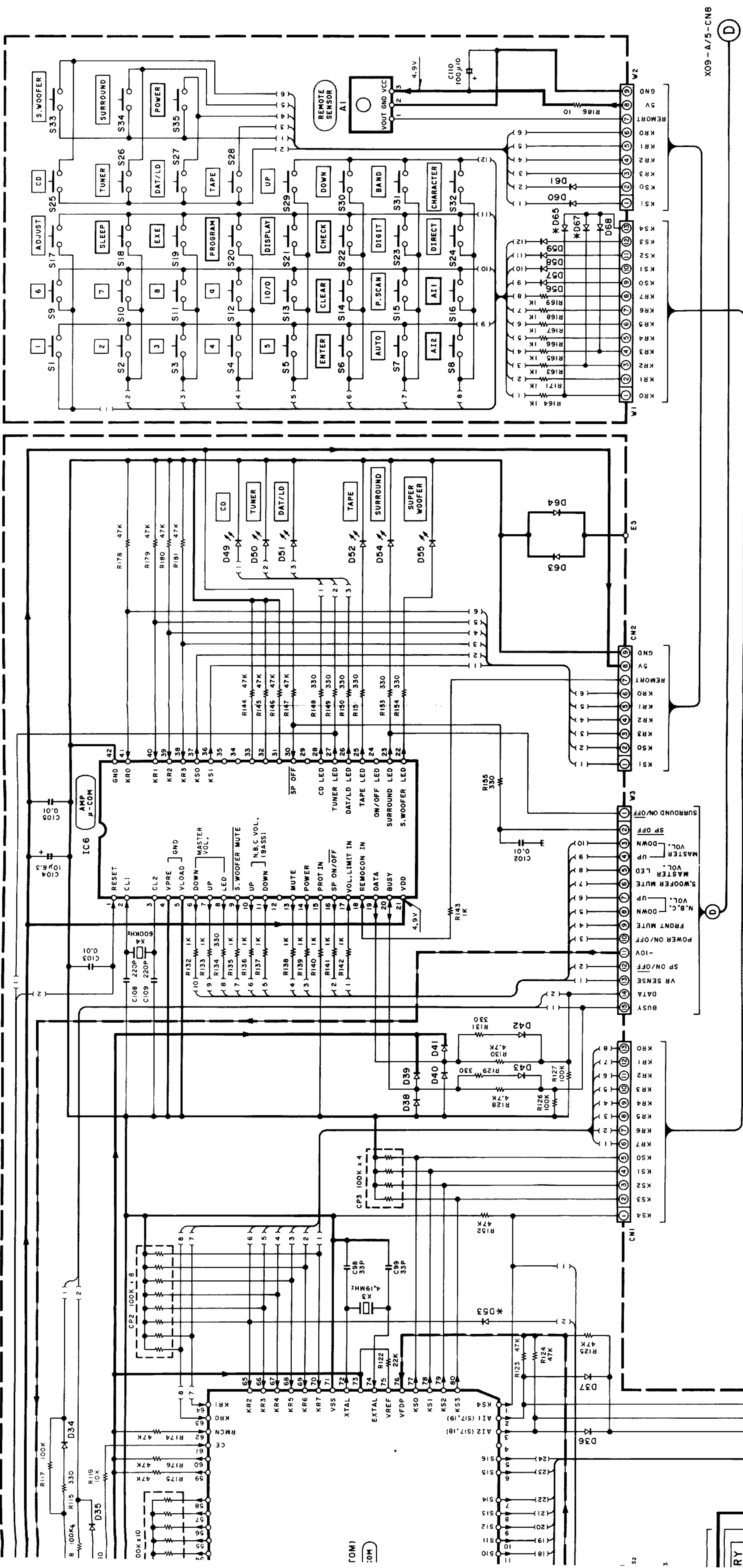
- Q3, 5-7, 11, 12, 20, 22, 23 : 2SC945 (A)(Q,P) or 2SC1740S (Q,R)
- Q4 : 2SC1845 (F,E)
- Q8-10 : 2SA733 (A)(Q,P) or 2SA933S (Q,R)
- Q18, 19 : 2SD1302 (S,T)
- Q21 : 2SD1266 (Q,P)
- D1-9, 11, 12, 23 : 1SS133 or HSS104
- D18, 19, 21, 22 : S5566B
- D25 : RD5.1ES (B2) or HZ55.1 (NB2)
- D202 : RD5.1JS (B2) or HZ55.1S (B2)

- IC1 : LA1265
- IC2 : AN7470
- IC3 : LM7001
- IC9, 10 : AN7805F or  $\mu$ PCT805HF
- Q1 : 2SC1923 (R,O)
- Q2 : 2SK1631 (L,M)

- R1 : 100K
- R2 : 100K
- R3 : 100K
- R4 : 100K
- R5 : 100K
- R6 : 100K
- R7 : 8.2K
- R8 : 100K
- R9 : 100K
- R10 : 100K
- R11 : 100K
- R12 : 100K
- R13 : 100K
- R14 : 100K
- R15 : 100K
- R16 : 100K
- R17 : 100K
- R18 : 100K
- R19 : 100K
- R20 : 100K
- R21 : 100K
- R22 : 100K
- R23 : 100K
- R24 : 100K
- R25 : 100K
- R26 : 100K
- R27 : 100K
- R28 : 100K
- R29 : 100K
- R30 : 100K
- R31 : 100K
- R32 : 100K
- R33 : 100K
- R34 : 100K
- R35 : 100K
- R36 : 100K
- R37 : 100K
- R38 : 100K
- R39 : 100K
- R40 : 100K
- R41 : 100K
- R42 : 100K
- R43 : 100K
- R44 : 100K
- R45 : 100K
- R46 : 100K
- R47 : 100K
- R48 : 100K
- R49 : 100K
- R50 : 100K
- R51 : 100K
- R52 : 100K
- R53 : 100K
- R54 : 100K
- R55 : 100K
- R56 : 100K
- R57 : 100K
- R58 : 100K
- R59 : 100K
- R60 : 100K
- R61 : 100K
- R62 : 100K
- R63 : 100K
- R64 : 100K
- R65 : 100K
- R66 : 100K
- R67 : 100K
- R68 : 100K
- R69 : 100K
- R70 : 100K
- R71 : 100K
- R72 : 100K
- R73 : 100K
- R74 : 100K
- R75 : 100K
- R76 : 100K
- R77 : 100K
- R78 : 100K
- R79 : 100K
- R80 : 100K
- R81 : 100K
- R82 : 100K
- R83 : 100K
- R84 : 100K
- R85 : 100K
- R86 : 100K
- R87 : 100K
- R88 : 100K
- R89 : 100K
- R90 : 100K
- R91 : 100K
- R92 : 100K
- R93 : 100K
- R94 : 100K
- R95 : 100K
- R96 : 100K
- R97 : 100K
- R98 : 100K
- R99 : 100K
- R100 : 100K

- C1 : 100P
- C2 : 100P
- C3 : 0.027
- C4 : 100P
- C5 : 100P
- C6 : 100P
- C7 : 100P
- C8 : 100P
- C9 : 100P
- C10 : 100P
- C11 : 100P
- C12 : 100P
- C13 : 100P
- C14 : 100P
- C15 : 100P
- C16 : 100P
- C17 : 100P
- C18 : 100P
- C19 : 100P
- C20 : 100P
- C21 : 100P
- C22 : 100P
- C23 : 100P
- C24 : 100P
- C25 : 100P
- C26 : 100P
- C27 : 100P
- C28 : 100P
- C29 : 100P
- C30 : 100P
- C31 : 100P
- C32 : 100P
- C33 : 100P
- C34 : 100P
- C35 : 100P
- C36 : 100P
- C37 : 100P
- C38 : 100P
- C39 : 100P
- C40 : 100P
- C41 : 100P
- C42 : 100P
- C43 : 100P
- C44 : 100P
- C45 : 100P
- C46 : 100P
- C47 : 100P
- C48 : 100P
- C49 : 100P
- C50 : 100P
- C51 : 100P
- C52 : 100P
- C53 : 100P
- C54 : 100P
- C55 : 100P
- C56 : 100P
- C57 : 100P
- C58 : 100P
- C59 : 100P
- C60 : 100P
- C61 : 100P
- C62 : 100P
- C63 : 100P
- C64 : 100P
- C65 : 100P
- C66 : 100P
- C67 : 100P
- C68 : 100P
- C69 : 100P
- C70 : 100P
- C71 : 100P
- C72 : 100P
- C73 : 100P
- C74 : 100P
- C75 : 100P
- C76 : 100P
- C77 : 100P
- C78 : 100P
- C79 : 100P
- C80 : 100P
- C81 : 100P
- C82 : 100P
- C83 : 100P
- C84 : 100P
- C85 : 100P
- C86 : 100P
- C87 : 100P
- C88 : 100P
- C89 : 100P
- C90 : 100P
- C91 : 100P
- C92 : 100P
- C93 : 100P
- C94 : 100P
- C95 : 100P
- C96 : 100P
- C97 : 100P
- C98 : 100P
- C99 : 100P
- C100 : 100P

DC voltages are as measured with a high-impedance voltmeter during reception of the FM broadcast signal (with a signal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).



DESTINATION COUNTRY	ABB.	UNIT NAME	R182	D53	D65	D67	Q17
ENGLAND	T	X05-3992-71	NO	NO	YES	YES	NO
EUROPE	E	X05-3992-71	NO	NO	YES	YES	NO
AUSTRALIA	X	X05-3990-71	NO	NO	NO	NO	NO
GENERAL MARKET	M	X05-3990-21	YES	NO	NO	NO	YES
PX	Y	X05-3992-91	YES	YES	NO	NO	YES
U.S.A	K	X05-3990-10	NO	NO	NO	NO	NO
CANADA	P	X05-3990-10	NO	NO	NO	NO	NO

- IC5 : CXP50112-1270
- IC6 : APD7538ACU-232
- IC7 : PST529D
- Q14~16,17 : 2SA733(A)(Q,P) or 2SA933S(O,R)
- Q13 : 2SC945(A)(Q,P) or 2SC1740S(Q,R)
- D30~47,56~61,63~65,67~70 : ISS133 or HSS104
- D48 : RD10ES(B) or HZS10N(B)
- D49~52,54,55 : B30-1012-05
- D62 : RD3.3ES(B2) or HZS3.3N(B2)
- A1 : W02-1049-05 or W02-1048-05
- F.L1 : B-BT-986K

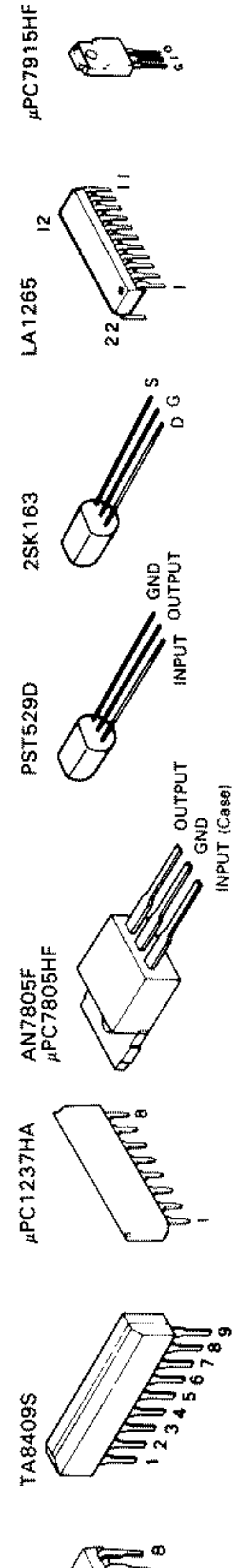
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

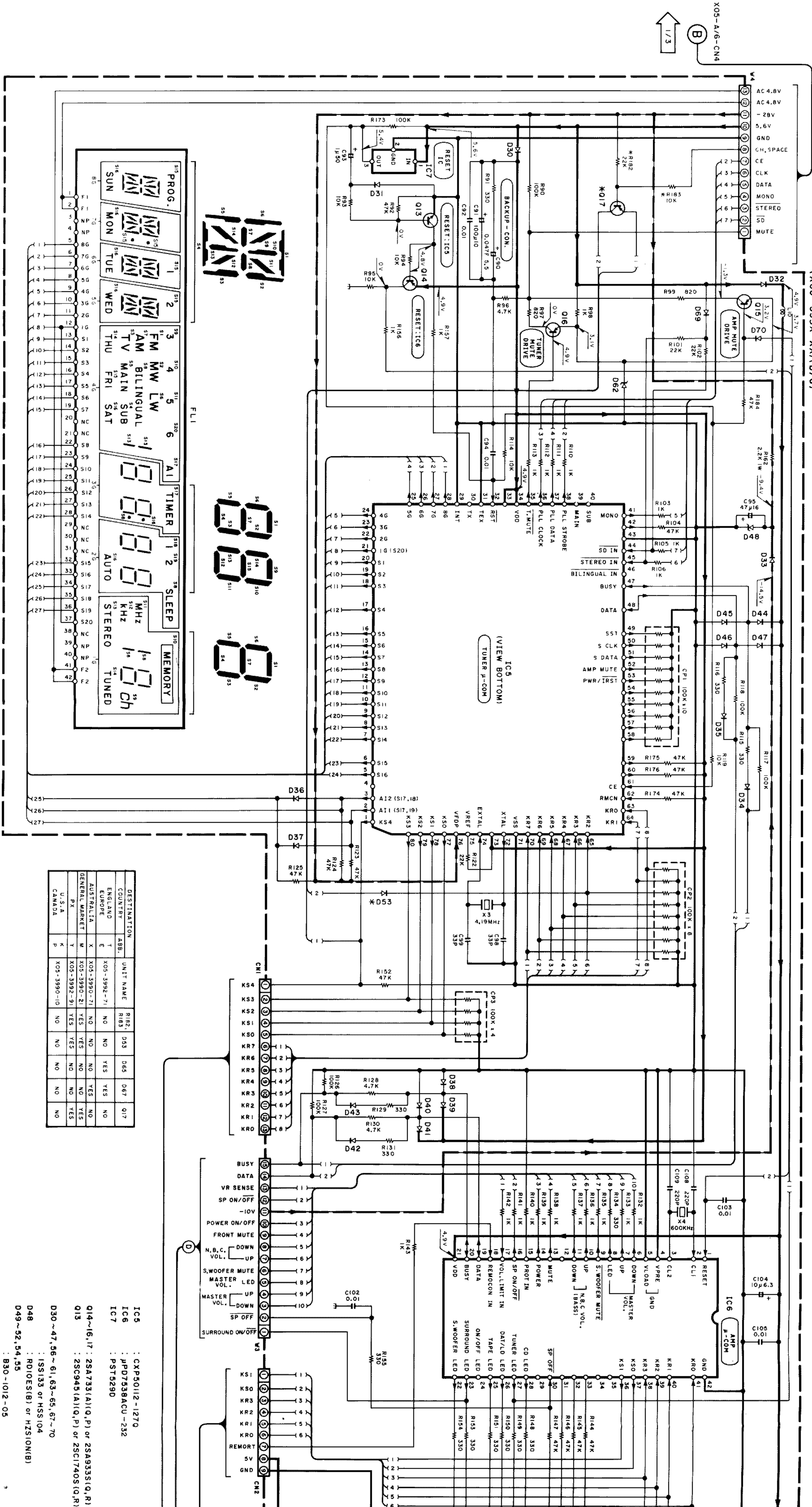
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



X09-A/5-CN8

3/3

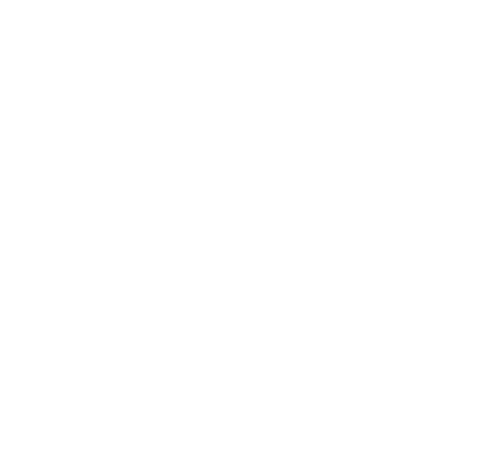
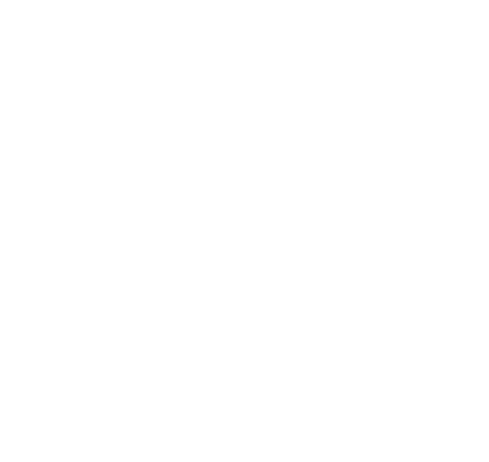
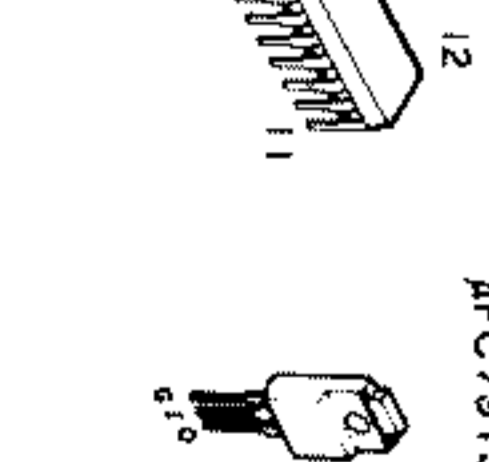
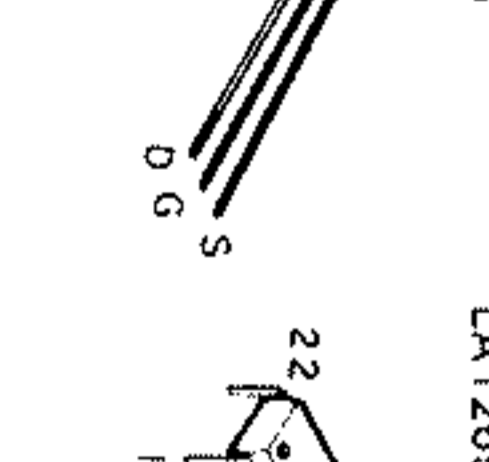
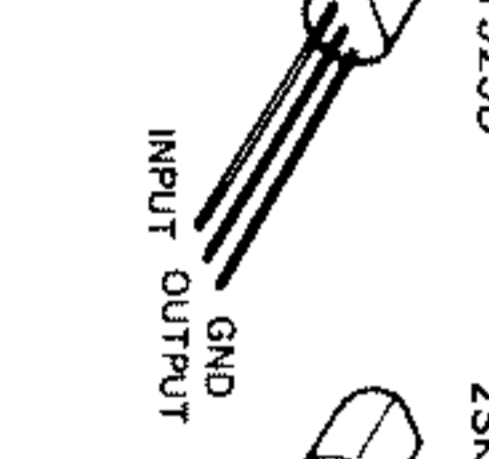
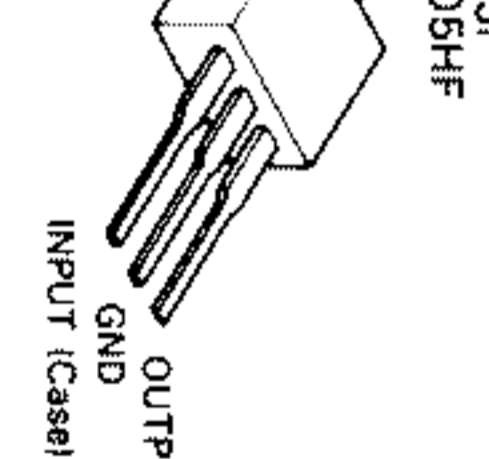
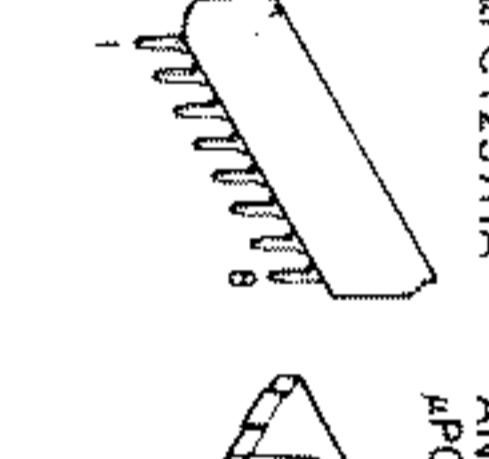
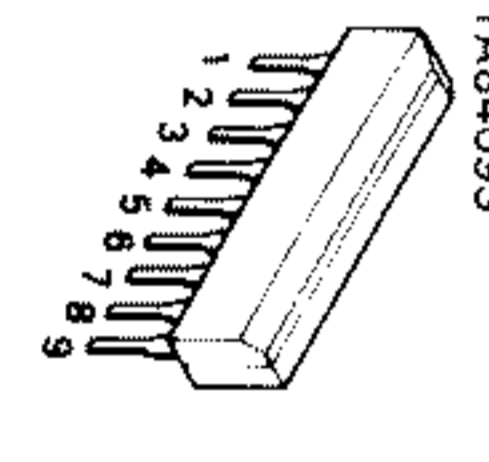
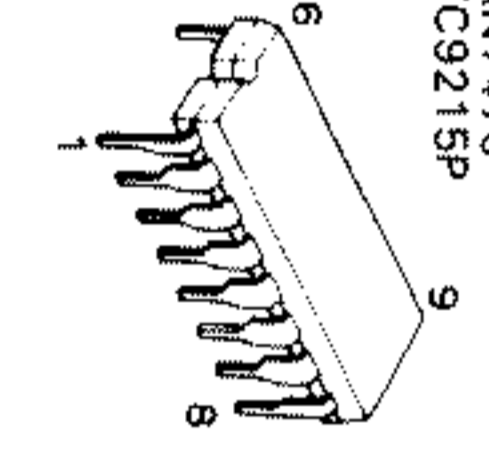
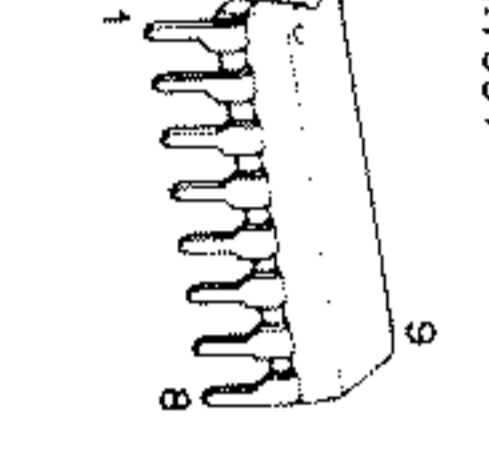
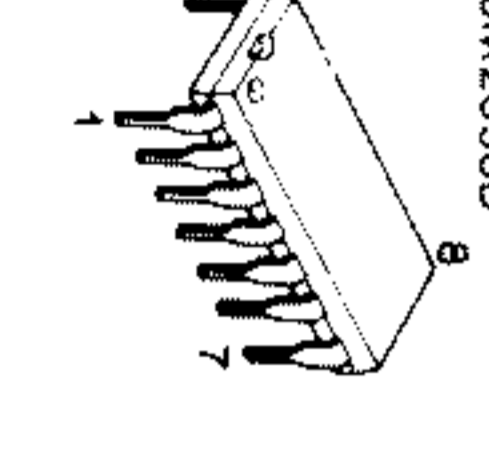
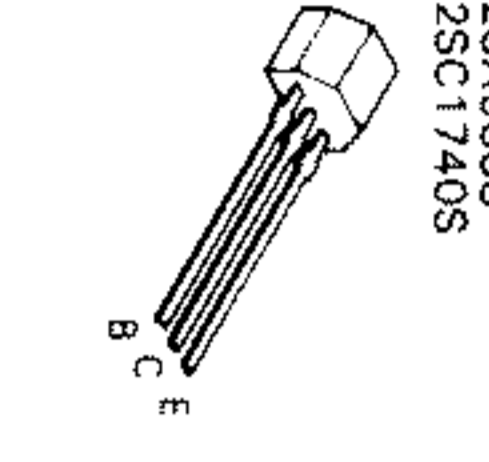
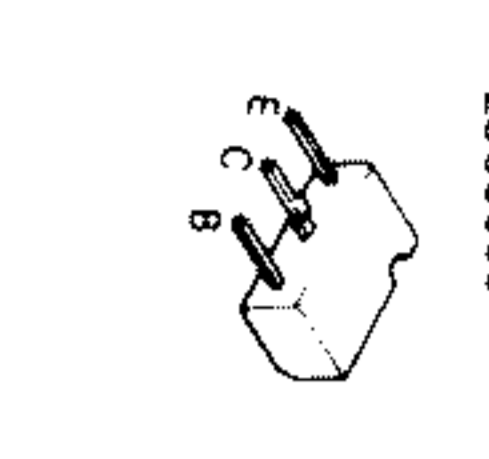
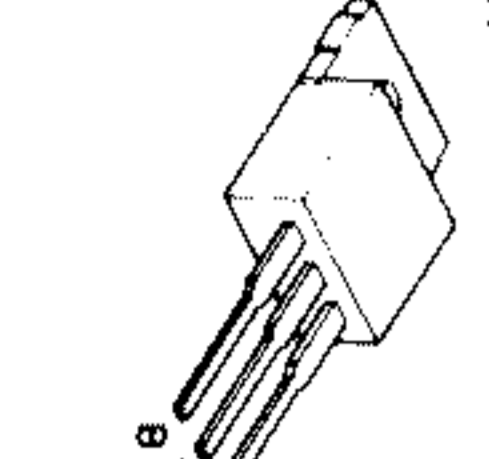
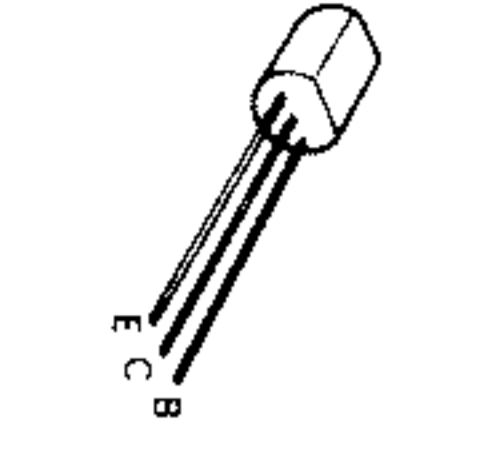


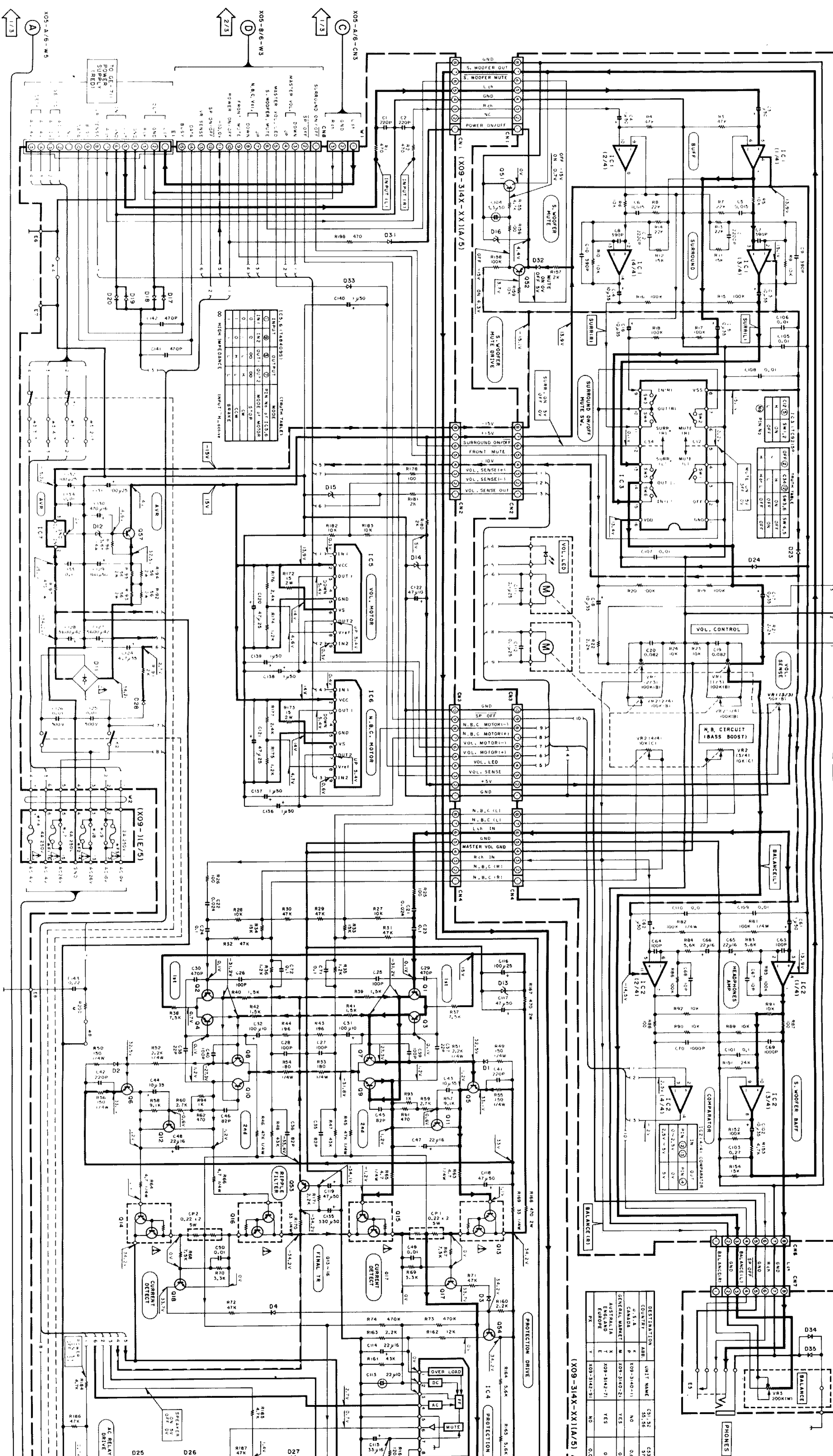


DESTINATION	UNIT NAME	R182	D43	D65	D67	Q17
ENGLAND	T	X05-3992-71	NO	NO	YES	NO
EUROPE	E	X05-3990-71	NO	NO	YES	NO
AUSTRALIA	X	X05-3990-71	NO	NO	YES	NO
GENERAL MARKET	M	X05-3990-21	YES	YES	NO	YES
PX	Y	X05-3992-91	YES	YES	NO	YES
U.S.A	K	X05-3990-10	NO	NO	NO	NO
CANADA	P	X05-3990-10	NO	NO	NO	NO

- IC5 : CXP50112-1270
- IC6 : MPD7538ACU-232
- IC7 : PST5290
- Q14~16, I7 : 2SA733(A)(Q,P) or 2SA933(S,Q,R)
- Q13 : 2SC945(A)(Q,P) or 2SC17405(Q,R)
- D30~47, 56~61, 63~65, 67~70 : ISS133 or HSS104
- D48 : RD10ES(B) or HZ10N(B)
- D49~52, 54, 55 : B30-1012-05
- D62 : RD3.3ES(B2) or HZS3.3N(B2)
- A1 : W02-1049-05 or W02-1048-05
- FL1 : 8-BT-986K

- 2SA733(A)
- 2SA992
- 2SC1845
- 2SC1923
- 2SC2631
- 2SC2878
- 2SC945(A)
- 2SD1302
- 2SD1266
- 2SC3866
- 2SA933S
- 2SC1740S
- NJM2058D
- LM7001
- AN7470
- TC9215P
- TAB409S
- μPC1237HA
- AN7805F
- μPC7805HF
- PST5290
- 2SK183
- LA1265
- μPC7915HF



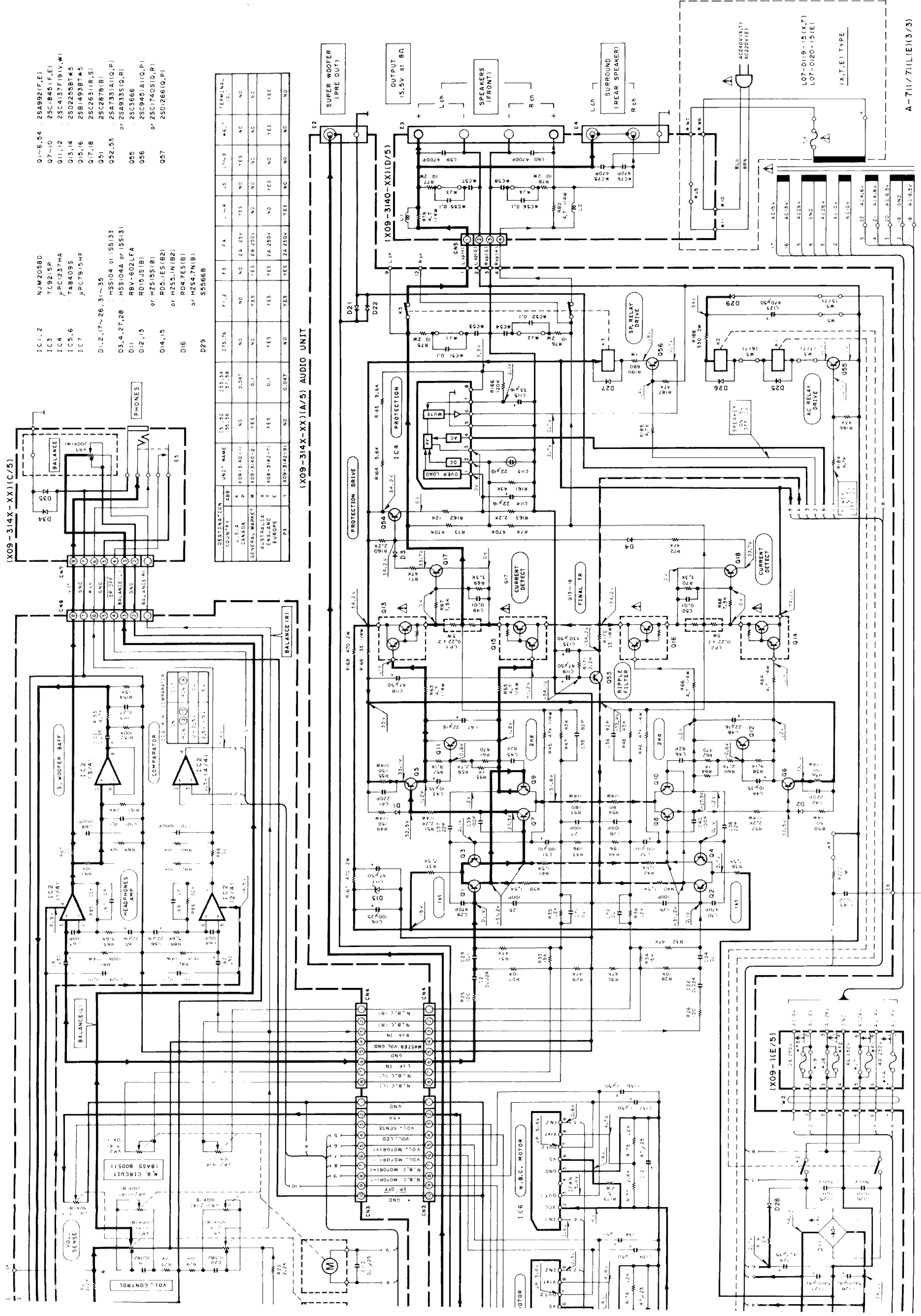


IC5 & I18 (A/D) (FRONT TABLE)

MODE	IN1	IN2	OUT1	OUT2	MODE	FRONT	MODE
0	0	0	0	0	0	0	0
1	0	0	0	0	1	1	1
2	0	0	0	0	2	2	2
3	0	0	0	0	3	3	3
4	0	0	0	0	4	4	4
5	0	0	0	0	5	5	5
6	0	0	0	0	6	6	6
7	0	0	0	0	7	7	7
8	0	0	0	0	8	8	8
9	0	0	0	0	9	9	9
10	0	0	0	0	10	10	10
11	0	0	0	0	11	11	11
12	0	0	0	0	12	12	12
13	0	0	0	0	13	13	13
14	0	0	0	0	14	14	14
15	0	0	0	0	15	15	15
16	0	0	0	0	16	16	16
17	0	0	0	0	17	17	17
18	0	0	0	0	18	18	18
19	0	0	0	0	19	19	19
20	0	0	0	0	20	20	20
21	0	0	0	0	21	21	21
22	0	0	0	0	22	22	22
23	0	0	0	0	23	23	23
24	0	0	0	0	24	24	24
25	0	0	0	0	25	25	25
26	0	0	0	0	26	26	26
27	0	0	0	0	27	27	27
28	0	0	0	0	28	28	28
29	0	0	0	0	29	29	29
30	0	0	0	0	30	30	30
31	0	0	0	0	31	31	31
32	0	0	0	0	32	32	32
33	0	0	0	0	33	33	33
34	0	0	0	0	34	34	34
35	0	0	0	0	35	35	35
36	0	0	0	0	36	36	36
37	0	0	0	0	37	37	37
38	0	0	0	0	38	38	38
39	0	0	0	0	39	39	39
40	0	0	0	0	40	40	40
41	0	0	0	0	41	41	41
42	0	0	0	0	42	42	42
43	0	0	0	0	43	43	43
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53	0	0	0	0	53	53	53
54	0	0	0	0	54	54	54
55	0	0	0	0	55	55	55
56	0	0	0	0	56	56	56
57	0	0	0	0	57	57	57
58	0	0	0	0	58	58	58
59	0	0	0	0	59	59	59
60	0	0	0	0	60	60	60
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62	0	0	0	0	62	62	62
63	0	0	0	0	63	63	63
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68	0	0	0	0	68	68	68
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70	0	0	0	0	70	70	70
71	0	0	0	0	71	71	71
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73	0	0	0	0	73	73	73
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75	0	0	0	0	75	75	75
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77	0	0	0	0	77	77	77
78	0	0	0	0	78	78	78
79	0	0	0	0	79	79	79
80	0	0	0	0	80	80	80
81	0	0	0	0	81	81	81
82	0	0	0	0	82	82	82
83	0	0	0	0	83	83	83
84	0	0	0	0	84	84	84
85	0	0	0	0	85	85	85
86	0	0	0	0	86	86	86
87	0	0	0	0	87	87	87
88	0	0	0	0	88	88	88
89	0	0	0	0	89	89	89
90	0	0	0	0	90	90	90
91	0	0	0	0	91	91	91
92	0	0	0	0	92	92	92
93	0	0	0	0	93	93	93
94	0	0	0	0	94	94	94
95	0	0	0	0	95	95	95
96	0	0	0	0	96	96	96
97	0	0	0	0	97	97	97
98	0	0	0	0	98	98	98
99	0	0	0	0	99	99	99
100	0	0	0	0	100	100	100

(X09-314X-XX1(A/5) AUDIO

DESTINATION	UNIT NAME	C1, 21	C2, 24
U.S.A.	K	55.26	57.26
GENERAL MARKET	M	509-3140-11	0.047
FRANCE	T	509-3140-21	0.1
GERMANY	T	509-3140-71	0.1
EUROPE	E	509-3140-91	0.047
OTHER	N		

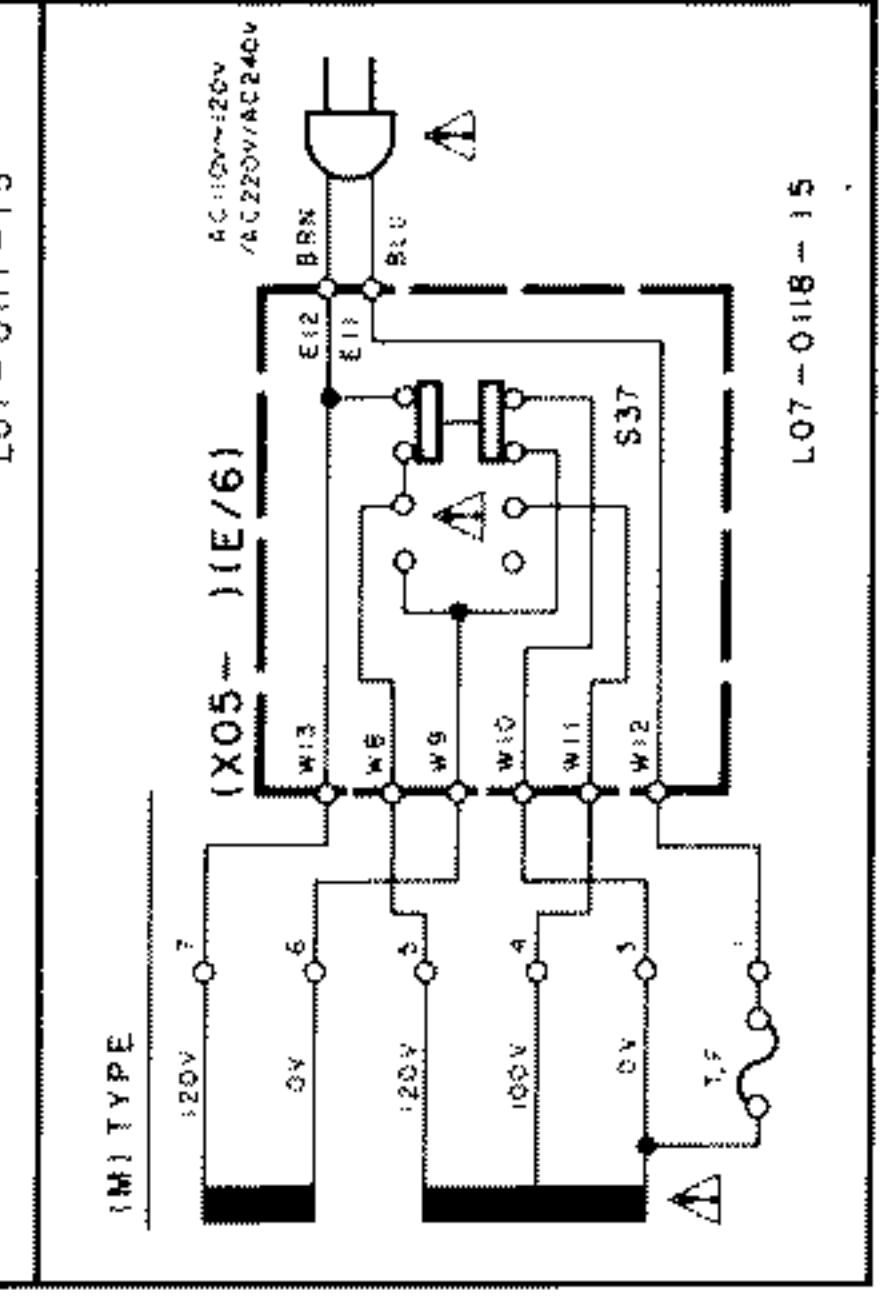
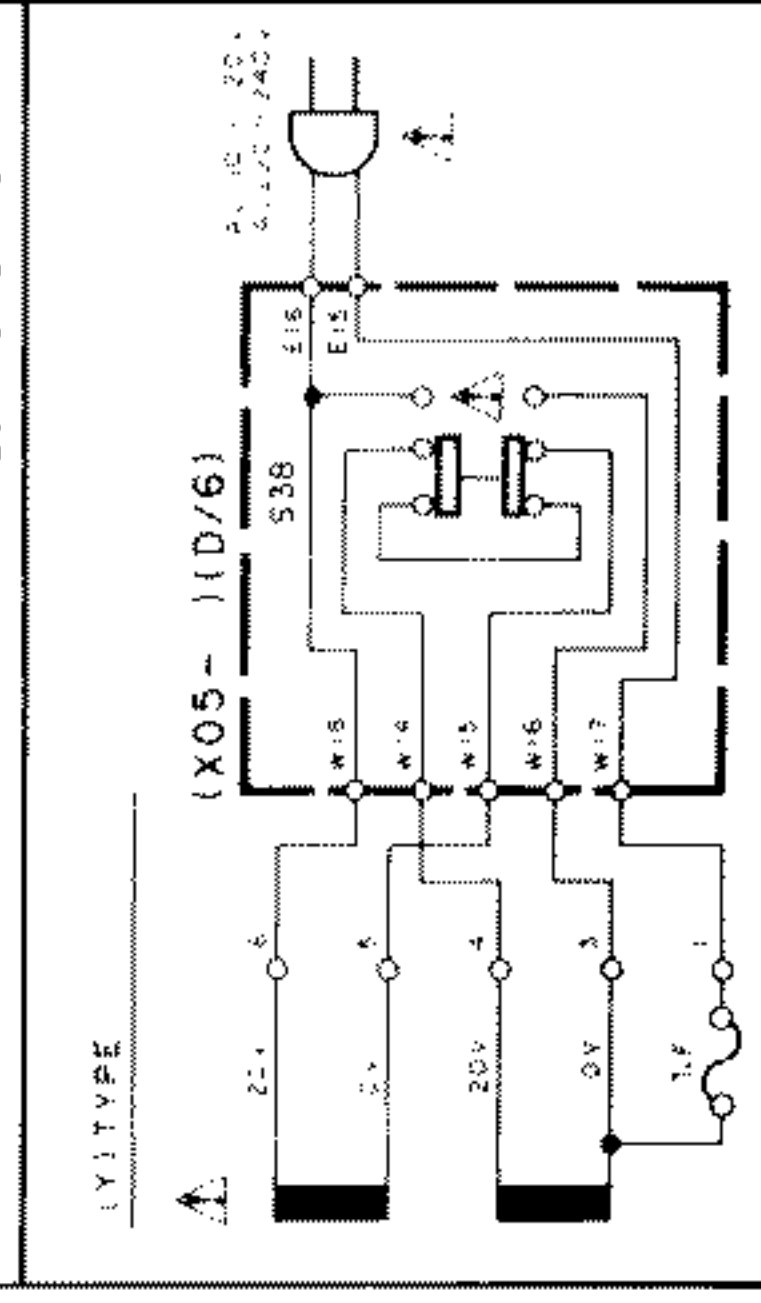
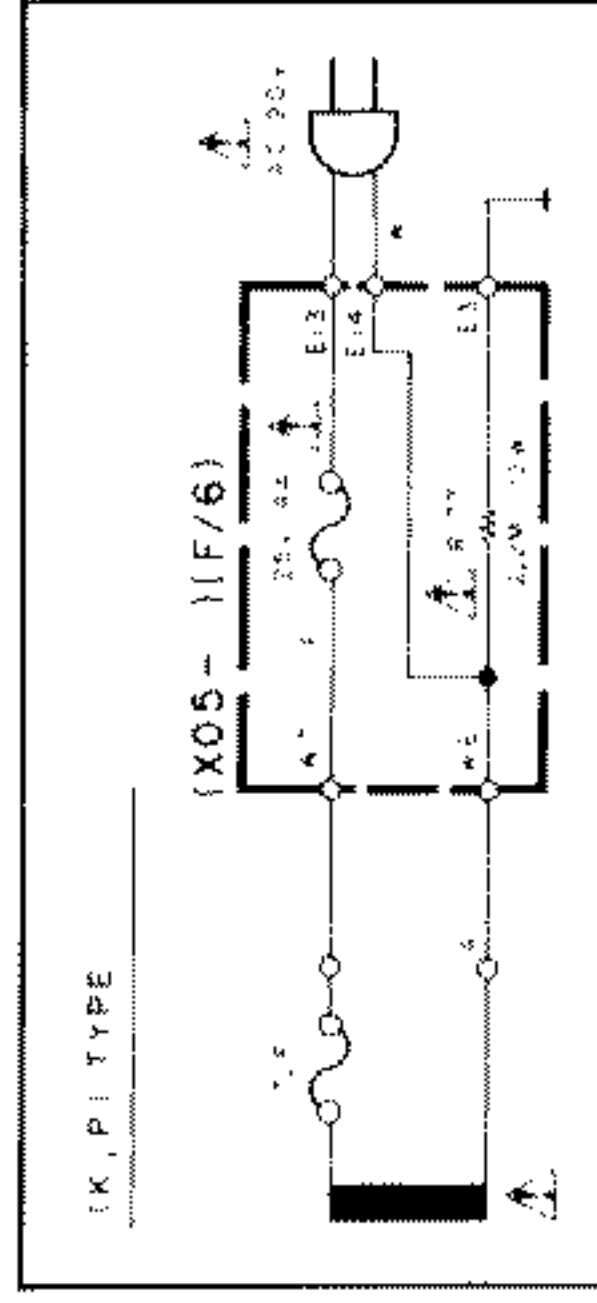


(X09-314X-XX)(I/C/5)

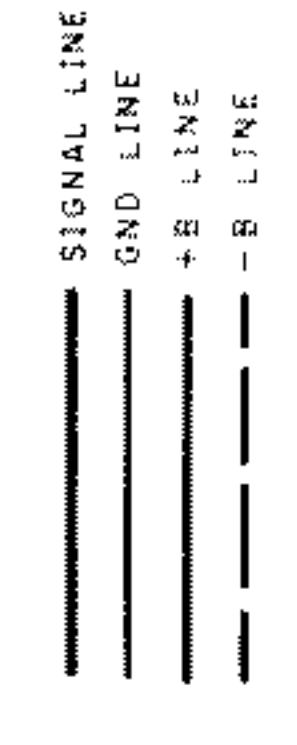
- IC1,2 NJM2058D
- IC3 TC9215P
- IC4 JFC1237HA
- IC5,6 TAB4095
- IC7 JFC7915HF
- D1,2,17~26,31~35 H55104 or H55133
- D3,4,27,28 H55104 or H55133
- D11 RBV-602LF4
- D12,13 RD19J5(B)
- D14,15 RD51ES(B2)
- D16 RD47ES(B)
- D29 S5566B
- Q1~6,54, 25A992(F,E)
- Q7~10 25C1845(F,E)
- Q11,12 25C4137(F1V,W)
- Q13,14 25D2255(BT,K,S)
- Q15,16 28B1493(BT,K,S)
- Q17,18 25C2631(R,S)
- Q51 25C2878(B)
- Q52,53 25A733(A10,P)
- Q54 25A935(G,R)
- Q55 25C3666
- Q56 25C1740(S,Q,P)
- Q57 25D1266(Q,P)

DESTINATION	UNIT NAME	F1,2	F3	F4	F5	F6	TERM. NO.
U.S.A.	K 40P-340-11	NO	NO	NO	NO	NO	NO
CANADA	P 40P-340-11	NO	NO	NO	NO	NO	NO
GENERAL MARKET	W 40P-340-2	YES	YES	YES	YES	YES	NO
ASIA, OCEANIA	X 40P-340-2	YES	YES	YES	YES	YES	NO
EUROPE	E 40P-340-2	YES	YES	YES	YES	YES	NO
FX	T 40P-340-2	NO	NO	NO	NO	NO	NO

(X09-314X-XX)(I/A/5) AUDIO UNIT



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

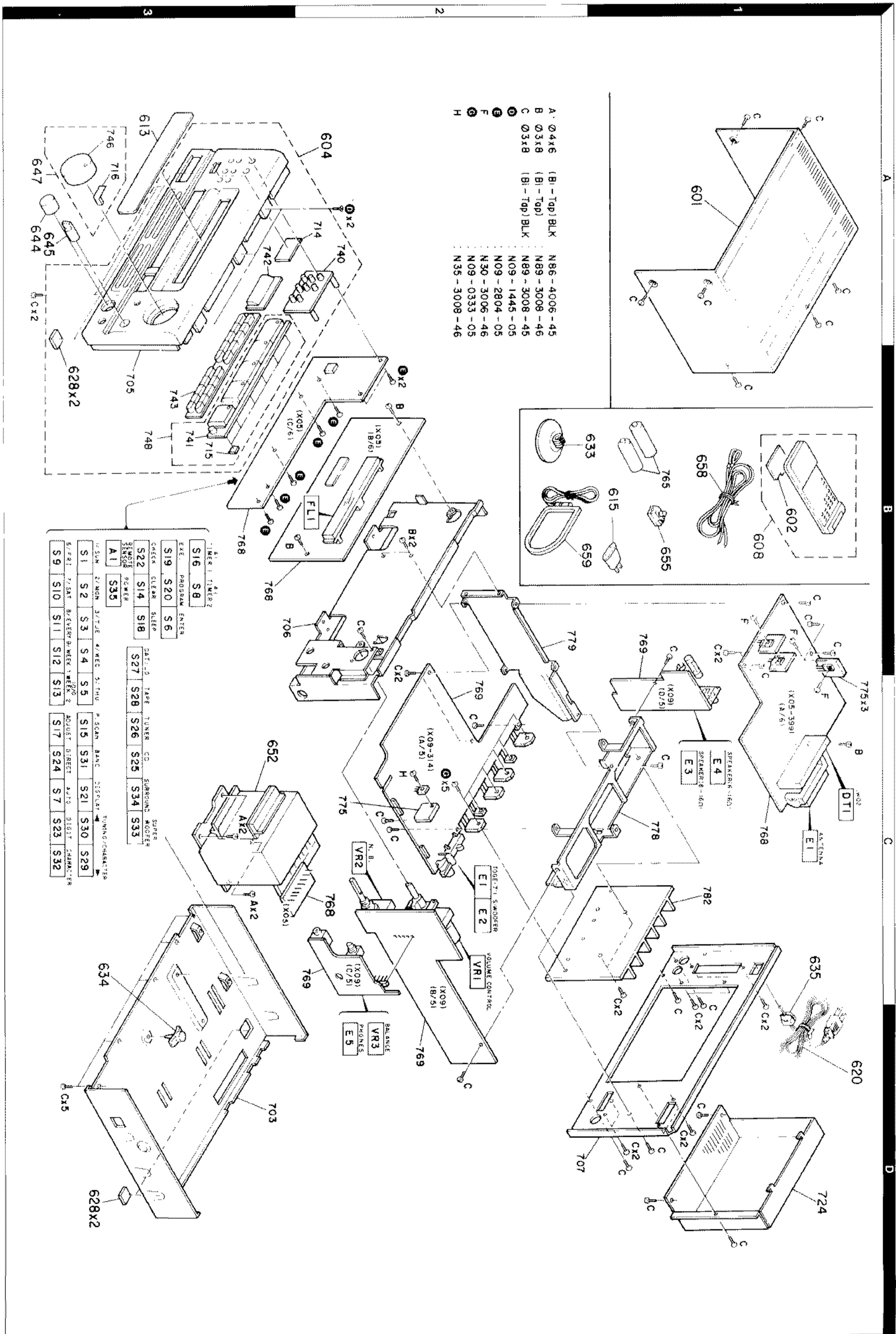


DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.



EXPLODED VIEW

EXPLODED VIEW



- A. Ø4x6 (B)-Top) BLK N86-4006-45
- B. Ø3x8 (B)-Top) BLK N89-3008-46
- C. Ø3x8 (B)-Top) BLK N89-3008-45
- D. N09-1445-05
- E. N09-2804-05
- F. N30-3006-46
- G. N09-0333-05
- H. N35-3008-46

TIMER/TIMER2					CHECK CLEAR SLEEP					DATE/D. YEAR TUNER CD SEARCHING MODE					SPEER								
S16	S8	S19	S20	S6	S22	S14	S18	S27	S28	S26	S25	S34	S33	S1	S2	S3	S4	S5	S15	S31	S21	S30	S29
S19 S20 S6					S27 S28 S26 S25 S34 S33					S1 S2 S3 S4 S5					S15 S31 S21 S30 S29								

Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

\* New Parts  
 Parts without Parts No. are not supplied.  
 Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
 Teile ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Desti- nation	Re- marks
参照番号	位置	新	部品番号	部品名 / 規格	仕	備考
<b>A-7117711L</b>						
601	1A	*	A01-1866-01	METALLIC CABINET		
602	1B	*	A09-0106-08	BATTERY COVER		
604	2A	*	A20-6100-02	PANEL ASSY(A-711L)		
604	2A	*	A20-6107-02	PANEL ASSY(A-711)		
608	1B	*	A70-0367-05	REMOTE CONTROLLER ASSY	TE	
613	3A	*	810-1093-04	FRONT GLASS	K	
-	-	*	B46-0092-03	WARRANTY CARD	Y	
-	-	*	B46-0094-03	WARRANTY CARD	Y	
-	-	*	B46-0095-03	WARRANTY CARD	X	
-	-	*	B46-0096-13	WARRANTY CARD	X	
-	-	*	B46-0121-03	WARRANTY CARD	P	
-	-	*	B46-0122-13	WARRANTY CARD	E	
-	-	*	B46-0143-13	WARRANTY CARD	T	
-	-	*	B58-0513-04	CAUTION CARD	C4	
-	-	*	B58-0803-13	CAUTION CARD	Y	
-	-	*	B60-0155-00	INSTRUCTION MANUAL(ENGLISH)	E	
-	-	*	B60-0156-00	INSTRUCTION MANUAL(FRENCH)	PE	
-	-	*	B60-0157-00	INSTRUCTION MANUAL(GERMAN)	E	
-	-	*	B60-0159-00	INSTRUCTION MANUAL(DUTCH)	E	
-	-	*	B60-0159-00	INSTRUCTION MANUAL(ITALIAN)	E	
-	-	*	B60-0160-00	INSTRUCTION MANUAL(CHINESE)	M	
-	-	*	B60-0161-00	INSTRUCTION MANUAL(SPANISH)	M	
615	1B	*	E03-0115-05	AC PLUG ADAPTER	M	
620	1D	*	E30-0459-05	AC POWER CORD	ME	
620	1D	*	E30-0812-05	AC POWER CORD	Y	
620	1D	*	E30-0974-05	AC POWER CORD	KP	
620	1D	*	E30-1341-05	AC POWER CORD	X	
620	1D	*	E30-1416-05	AC POWER CORD	T	
628	3B, 3D	*	G11-2017-04	CUSHION		
-	-	*	H01-8845-04	ITEM CARTON CASE(A-711)	KPYMX	
-	-	*	H01-8846-04	ITEM CARTON CASE(A-711L)	TE	
-	-	*	H09-0105-04	INNER PACKAGE		
-	-	*	H10-5023-12	POLYSTYRENE FOAMED FIXTURE		
-	-	*	H10-5024-12	POLYSTYRENE FOAMED FIXTURE		
-	-	*	H20-0566-04	PROTECTION COVER		
-	-	*	H25-0397-04	PROTECTION BAG	M	
-	-	*	H25-0631-04	PROTECTION BAG	KPYXTE	
633	2B	*	J19-2815-04	ANTENNA HOLDER		
634	3C	*	J19-3300-05	UNIT HOLDER		
635	1C	*	J42-0083-05	POWER CORD BUSHING		
-	-	*	J11-0167-05	WIRE CLAMPER		
-	-	*	J61-0307-05	WIRE BAND		
644	3A	*	K29-3959-04	KNØB(N.B.CIRCUIT)		
645	3A	*	K29-3960-04	KNØB(BALANCE)		
647	3A	*	K29-3997-04	KNØB ASSY(VOLUME)		
652	3C	*	L07-0116-15	POWER TRANSFORMER	KP	
652	3C	*	L07-0117-15	POWER TRANSFORMER	Y	
652	3C	*	L07-0118-15	POWER TRANSFORMER	M	
652	3C	*	L07-0119-15	POWER TRANSFORMER	XT	
652	3C	*	L07-0120-15	POWER TRANSFORMER	E	

E: Scandinavia & Europe K: USA P: Canada W: Europe  
 Y: P(X) Far East, Hawaii T: England M: Other Areas  
 V: AAFES(Europe) X: Australia

▲ indicates safety critical components.

PARTS LIST

\* New Parts  
 Parts without Parts No. are not supplied.  
 Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
 Teile ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Desti- nation	Re- marks
参照番号	位置	新	部品番号	部品名 / 規格	仕	備考
<b>TUNER UNIT (X05-399X-XX, 0-10; K, P type, 0-71; X type, 2-71; T, E type, 2-91; Y type)</b>						
649	-52		B30-1012-05	LED(SLP-961C-50)		
654	.55		B30-1012-05	LED(SLP-961C-50)		
C1			CE04KW1H010M	ELECTRØ		
C2			CE04KW1E101M	ELECTRØ		
C3			CE92FV1H273J	MF		
C4			CE04KW1H010M	ELECTRØ		
C5			CE04KW1E101M	ELECTRØ		
C6	.7		C91-0769-05	CERAMIC	K	
C8	.11		CK45FF1H223Z	CERAMIC	Z	
C12			C91-0085-05	CERAMIC	N	
C13	.14		CK45FF1H223Z	CERAMIC	Z	
C15			C91-0085-05	CERAMIC	N	
C16			CK45FF1H223Z	CERAMIC	Z	
C17			CE04KW1H2R2M	ELECTRØ		
C18			CE04KW1V4R7M	ELECTRØ		
C19			CK45FF1H223Z	CERAMIC	Z	
C20			CE04KW1H3R3M	ELECTRØ		
C21			CK45FF1H103Z	CERAMIC	Z	
C22			CK45FF1H223Z	CERAMIC	Z	
C23			CE04KW1V100M	ELECTRØ		
C24			CK45FF1H223Z	CERAMIC	Z	
C25			CF92FV1H153J	MF	J	
C26			CE04KW1V100M	ELECTRØ		
C27			CE04KW1H47M	ELECTRØ		
C28	-30		CK45FF1H103Z	CERAMIC	Z	
C31			CC45FSL1H101J	CERAMIC	J	
C32			CK45FF1H103Z	CERAMIC	Z	
C33			CE04KW1C470M	ELECTRØ		
C34			CK45FB1H471K	CERAMIC	K	
C35			CC45FSL1H121J	CERAMIC	J	
C36			CC45FSL1H271J	CERAMIC	J	
C37			CF92FV1H152J	MF	J	
C38			CF92FV1H132J	MF	J	
C39			CK45FB1H471K	CERAMIC	K	
C40			CE04KW1H2R2M	ELECTRØ		
C41			CE04KW1H3R3M	ELECTRØ		
C42			CE04KW1H47M	ELECTRØ		
C43			CF92FV1H473J	MF	J	
C44			CC93FCH1H471J	CERAMIC	J	
C45			CK45FF1H103Z	CERAMIC	Z	
C46	.47		CC45FSL1H221J	CERAMIC	J	
C48			CE04KW1C101M	ELECTRØ		
C49			CC45FSL1H680J	CERAMIC	J	
C50	.51		CE04KW1H3R3M	ELECTRØ		
C52	.53		CF92FV1H752J	MF	J	

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X3 X4			L77-1175-05 L78-0274-05	CRYSTAL RESONATOR(4.19MHz) RESONATOR(600kHz)		
C F	1B 1B		N30-3008-46 N89-3008-45	PAN HEAD MACHINE SCREW BINDING HEAD TAPITTE SCREW		
CP1 CP2 CP3			R90-0802-05 R90-0492-05 R90-0482-05	MULTI-COMP 100KX10 J 1/4W MULTI-COMP 100KX8 J 1/6W MULTI-COMP 100KX4 J 1/6W		
R16 R21			RD14AB2E101J RD14AB2E101J	FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W		
R51 R53 R54 R55 R56 R57 R162			RD14AB2E151J RS14KB3D181J RS14KB3D271J RS14KB3A271J RS14KB3A222J	FL-PROOF RD 150 J 1/4W FL-PROOF RS 180 J 2W FL-PROOF RS 270 J 2W FL-PROOF RS 270 J 1W FL-PROOF RS 2.2K J 1W		TE
R177 VR1 VR2 VR3			R92-0173-05 R12-3128-05 R12-1089-05 R12-5060-05	RC 2.2M M 1/2W TRIMMING POT. (22K)TUNE LEVEL TRIMMING POT. (4.7K)VCO TRIMMING POT. (220K)SEPARATION		KP
S1 S36 S37 S38	3B, 3C		S40-1064-05 S31-2094-05 S31-2082-05 S31-2128-05	PUSH SWITCH (CH. SPACE, DE-EM.) SLIDE SWITCH (POWER TYPE) SLIDE SWITCH (POWER TYPE) SLIDE SWITCH (POWER TYPE)		YM M Y
D1 D1 D1 D1 D9			HSS104 1SS133 HSS104 1SS133 HSS104	DIODE DIODE DIODE DIODE DIODE		TE TE KP KP KP
D9 D11 D11 D11 D18 D21 D22			1SS133 HSS104 1SS133 S5566B S5566B	DIODE DIODE DIODE DIODE DIODE		YM YM YM KP KP
D23 D23 D25 D25 D30 D30 D48 D48 D53			HSS104 1SS133 HSS104 HSS104 HSS104 1SS133 HSS104 HSS104 1SS133	DIODE DIODE ZENER DIODE ZENER DIODE DIODE DIODE DIODE ZENER DIODE ZENER DIODE DIODE		YM YM TE TE TE TE TE TE TE TE
D56 D56 D62 D62 D63 D63 D65 D65 D67 D67 D67 D68			HSS104 1SS133 HSS104 HSS104 HSS104 HSS104 HSS104 HSS104 HSS104 HSS104 HSS104 HSS104	DIODE DIODE ZENER DIODE ZENER DIODE DIODE DIODE DIODE DIODE DIODE DIODE DIODE DIODE		TE TE TE TE TE TE TE TE TE TE TE TE

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D68 D202 D202 FL1 IC1	2B	*	1SS133 HZS5.1S(B2) RD5.1JS(B2) 8-BT-980K LA1265	DIODE ZENER DIODE ZENER DIODE FLUORESCENT INDICATOR TUBE IC(FM/AM TUNER)		KPYM
IC2 IC3 IC5 IC6 IC7		*	AN7470 LM7001 CXP50112-127Q UPD7538ACU-232 PST529D	IC(FM MPX) IC(FULL FREQUENCY SYNTHESIZER) IC(TUNER u-COM) IC(AMP. u-COM) IC(RESET)		
IC9 IC9 Q1 Q2 Q3			AN7805F UPC7805HF 2SC1923(R,0) 2SK163(L,M) 2SC1740S(Q,R)	IC(VOLTAGE REGULATOR/ +5V) IC(VOLTAGE REGULATOR/ +5V) TRANSISTOR FET TRANSISTOR		TE
Q3 Q4 Q5 Q5 Q8			2SC945(A)(Q,P) 2SC1845(F,E) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SA733(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		TE TE TE KP KP
Q8 Q8 Q8 Q10 Q10			2SA933S(Q,R) 2SA733(A)(Q,P) 2SA933S(Q,R) 2SA733(A)(Q,P) 2SA933S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		YM YM YM KP KP
Q11 Q11 Q13 Q13 Q14			2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SA733(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		YM YM YM KP KP
Q14 Q17 Q17 Q18 Q20			2SA933S(Q,R) 2SC1740S(Q,R) 2SC945(A)(Q,P) 2SD1302(S,T) 2SC1740S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		YM YM YM KP KP
Q20 Q21 Q22 Q22			2SC945(A)(Q,P) 2SD1266(Q,P) 2SC1740S(Q,R) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		YM YM TE TE
A1 A1 DT1 DT1	3B 3B 1C 1C	*	W02-1048-05 W02-1049-05 W02-1041-05 W02-1042-05	ELECTRIC CIRCUIT MODULE ELECTRIC CIRCUIT MODULE FM FRONT-END ASSY(A-711L) FM FRONT-END ASSY(A-711)		TE KP YM KP
<b>AUDIO UNIT (X09-314X-XX, 0-11; K, P type, 0-21; M type, 2-71; X, T, E, type 2-91; Y type)</b>						
C1 C3 C5 C7 C11	2 4 6 10 12		CC45FSL1H221J CE04KW1H010M CF92FV1H153J CK45FB1H391K CK45FB1H222K	CERAMIC ELECTRO MF CERAMIC CERAMIC		J J J K K
C13 C19 C21 C23 C25	18 20 22 24 28		CE04KW1V100M CF92FV1H823J CF92FV1H243J CF92FV1H104J CC45FSL1H101J	ELECTRO MF MF MF CERAMIC		35WV J J J J

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F4		*	F53-0006-05	FUSE(125V 2A)	KP	
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
C	2C		N89-3008-45	BINDING HEAD TAPPIE SCREW		
G	2C		N09-0333-05	TAPPING SCREW (3X12)		
H	2C		N35-3008-46	BINDING HEAD MACHINE SCREW		
CPI ,2			R90-0187-05	MULTI-COMP		
R43 ,44			RN14BK2C1960F	RN		
R49 ,50			R014AB2E151JTS	FL-PROOF RD 150		
R51 ,52			R014AB2E222JTS	FL-PROOF RD 2.2K		
R53 ,54			R014AB2E181JTS	FL-PROOF RD 180		
R55 ,56			R014AB2E151JTS	FL-PROOF RD 150		
R63 -66			R014AB2E4R7JTS	FL-PROOF RD 4.7		
R75 -78			R014AB2E100JTE	FL-PROOF RS 10		
R79 ,80			R014AB2E4R7JTS	FL-PROOF RD 4.7		
R167,168			R014AB2E4R7JTE	FL-PROOF RS 4.7		
R169,170			R014AB2E330JTS	FL-PROOF RD 33		
R171			R014AB2E222JTS	FL-PROOF RD 2.2K		
R172,173			RS14DB3D150J	FL-PROOF RS 15		
R188			RS14DB3D331J	FL-PROOF RS 330		
R190			RS14DB3A681J	FL-PROOF RS 680		
R192-195		*	RS14DB3D560JTE	FL-PROOF RS 56		
R196			R014AB2E362JTS	FL-PROOF RD 3.6K		
R197			RS14DB3A471JTE	FL-PROOF RS 470		
VR1	2C	*	R29-5042-05	POTENTIOMETER(VOLUME CONTROL)		
VR2	2C	*	R29-5043-05	POTENTIOMETER(N.B.CIRCUIT)		
VR3	2D	*	R05-3015-05	POTENTIOMETER(BALANCE)		
K1 ,2		*	SS1-2094-05	MAGNETIC RELAY(AC ON/OFF)		
K3			SS1-2092-05	MAGNETIC RELAY(SPEAKER ON/OFF)		
D1 ,2			HSS104	DIODE		
D1 ,2			HSS133	DIODE		
D3 ,4			HSS104A	DIODE		
D3 ,4			ISS131	DIODE		
D11			RBV-602LFA	DIODE		
D12 ,13			HZS1SS(B)	ZENER DIODE		
D12 ,13			R01SJS(B)	ZENER DIODE		
D14 ,15			HZS5.1N(B2)	ZENER DIODE		
D14 ,15			R05.1ES(B2)	ZENER DIODE		
D16			HZS4.7N(B)	ZENER DIODE		
D16			R04.7ES(B)	ZENER DIODE		
D17 -26			HSS104	DIODE		
D17 -26			ISS133	DIODE		
D27 ,28			HSS104A	DIODE		
D27 ,28			ISS131	DIODE		
D29			S5566B	DIODE		
D31 -35			HSS104	DIODE		
D31 -35			ISS133	DIODE		
IC1 ,2			NJM2058D	IC(OP AMP X4)		
IC3			TC921SP	IC(ANALOG SWITCH X 6)		
IC4			UPC1237HA	IC(POWER AMP)		
IC5 ,6			TA8409S	IC(MOTOR CONTROL)		
IC7			UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
Q1			ZSA992(F,E)	TRANSISTOR		

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Q7 -10			2SC1845(F,E)	TRANSISTOR		
Q11 ,12			2SC4137F19(V,W)	TRANSISTOR		
Q13 ,14		*	2SD2255B1*5	TRANSISTOR		
Q15 ,16		*	2SB1493B1*5	TRANSISTOR		
Q17 ,18			2SC2631(R,S)	TRANSISTOR		
Q51			2SC2878(B)	TRANSISTOR		
Q52 ,53			2SA733(A)(Q,P)	TRANSISTOR		
Q54			2SA933S(Q,R)	TRANSISTOR		
Q55			2SA992(F,E)	TRANSISTOR		
Q56			2SC3666	TRANSISTOR		
Q57			2SC1740S(Q,R)	TRANSISTOR		
			2SC945(A)(Q,P)	TRANSISTOR		
			2SD1266(Q,P)	TRANSISTOR		

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